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RETRO* GAMER

I S S U E O N E



RETRO GAMER* ISSUE ONE
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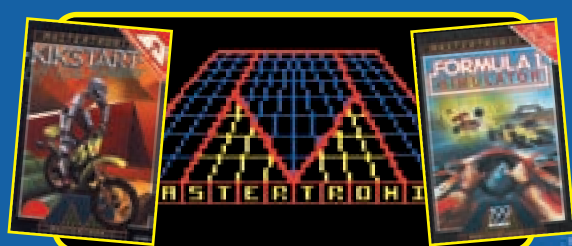


SINCLAIR SPECIAL



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MASTERTRONIC



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ALL TIME TOP 100

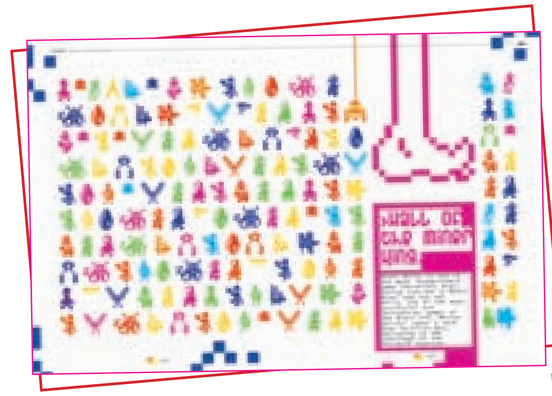


THE BEST GAMES EVER MADE

* RETRO GAMER is the UK's first regular retro magazine. 2004

>insides 01



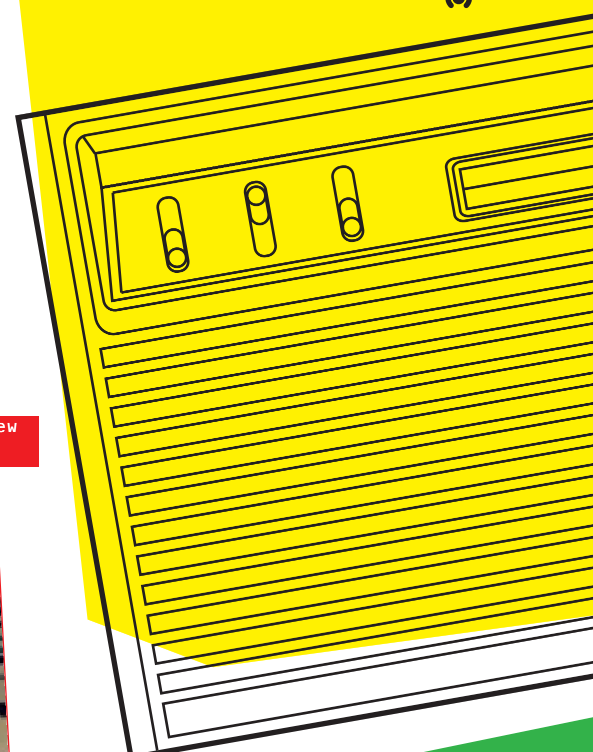






retro news

The latest news from the world of retro gaming



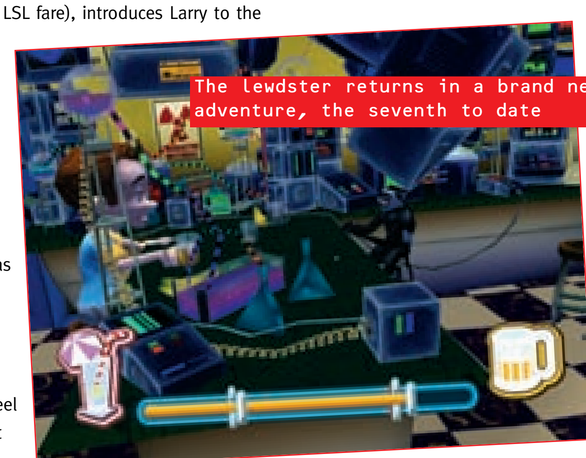
Get your Rocks off

Nope, it's not a long overdue reworking of Asteroids sadly, but the almost comparably exciting news that grubby little seed-meister Leisure Suit Larry is pulling on his raincoat once more and sinking into the murky underworld of sex shops, brothels and ladies of the night for another close-to-the-bone adventure!



This seventh Larry adventure, dubbed Magna Cum Laude, (which is actually some sort of Yankee award for being the biggest swot in a particular university, but also has the word cum in it, making it naturally 'hilarious' LSL fare), introduces Larry to the younger, hipper scene of PS2 and Xbox, and also reacquaints him with his old friend and sleazing buddy, the PC.

Taking its inspiration from such high-brow art house films as American Pie, we can expect lots of leching and leering, but not a whole lot of actual lovin', as Larry gets knocked back time and again by the lovely ladies in the game. While no one on the Retro Gamer team can imagine what that must feel like, we're looking forward to finding out. So, get your leisure suits dry-cleaned, pressed and ready for action when this one arrives later this year!

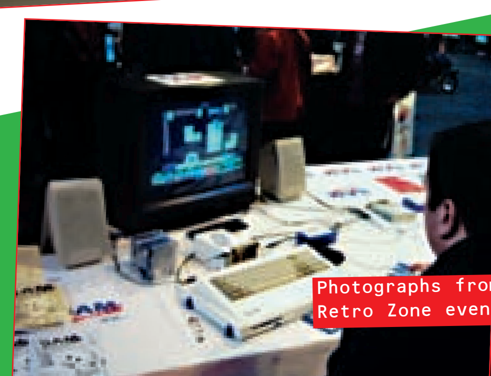


The lewdster returns in a brand new adventure, the seventh to date

Retro Zone

The second Micro Mart Computer Fair took place at the NEC in November, and once again the star of the show was the Retro Zone. Like an island of tranquillity in a hall full of sweaty bargain hunters, the Retro Zone gathered together the cream of the current retro scene. Allan Bairstow from Commodore Scene magazine was in attendance, showing off both classic and contemporary Commodore machines. Ever seen an accelerated C64 with a 4Gb hard drive? You would have if you were there. Other attendees included representatives from QUANTA, showing several generations of the Sinclair QL, Colin Piggot from Quazar (issue six of his Sam Revival magazine is on sale now) and Colin Woodcock, editor of the ZXF online Spectrum magazine. As an added treat, Arcade Warehouse supplied several arcade machines for the day, including the classic Dragon's Lair.

The Retro Zone event was expertly organised by Micro Mart column writer Shaun Bebbington, who also showed off rare computers from his extensive collection. Overall, the fair was a success, and the Retro Zone a highpoint. Here's hope that it goes ahead again next year, and if it does, don't miss it!





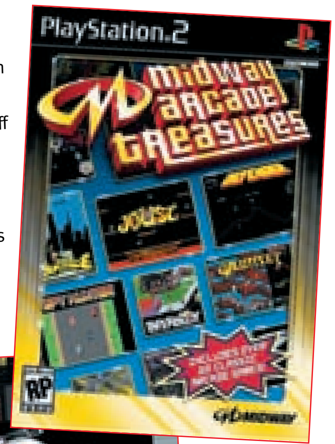
Photographs from the recent Retro Zone event

Buried Treasure

If you're too thick to figure out the emulation stuff (or just irritatingly honest), then don't worry, you don't have to miss out on your retro fix. Companies like Midway are realising that "there's gold in them thar cupboards", so they're busy dusting off their back catalogues and repacking them as anthologies of loveliness. The latest is Midway Arcade Treasures for the PS2, Xbox and GameCube.

Featuring 22 classic titles, MAT is a trip down memory lane that will moisten the eyes of anyone who's got a lifetime of gaming experience behind them. Here's a list of what's on it (deep breath) – Spyhunter, Defender, Gauntlet, Joust, Paperboy, Rampage, Marble Madness, Robotron 2084, Smash TV, Joust 2, Bubbles, Roadblasters, Stargate, Moon Patrol, Blaster, Rampart, Sinistar, Super Sprint, 720, Toobin', KLAX, SPLAT!, Satan's Hollow and Vindicators!

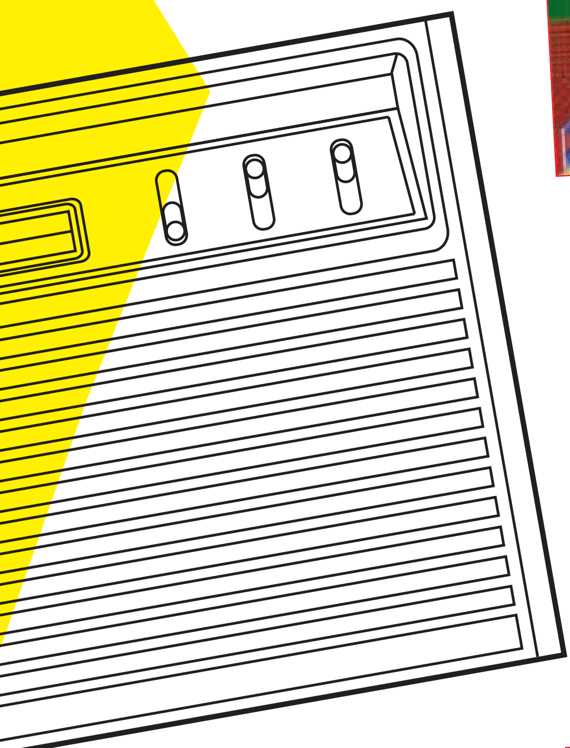
Now if there's nothing in there to get you drooling you must have sold your soul to EA. And believe us, you're going to hell for that.





Play these classic Midway games on your next-gen console





Half Fish. Half Machine. All Cop

Thirteen years after he first made his debut, James Pond has returned. Originally appearing on the Amiga ST and then gracing the likes of Sega's Megadrive, the chubby-faced mecha-fish finally slinks his way onto the PSone, a machine that in itself could be deemed as retro.

Robocod was the second outing for James Pond, who proved to be one of the most memorable platform characters of the 16-bit era. Purists will be pleased to note that the game is exactly the same as the 1992 Atari ST version, apart from a slight reworking of the intro sequence. Dr Mebbe has hijacked Santa's Lapland toy factory and kidnapped all the little elves. What a horrible little sod! Fortunately our hero Robocod, with his magically expanding stomach (it goes up instead of the one you've got, that goes out), is on the case, sure to bring scaly justice and free the dynamite-bound elves. What follows is 36 levels of platform mayhem for the bargain price of £9.99. All we wonder know is what happened to the PS2 update of Robocod, originally announced a couple of years ago? Robocod has been released by budget specialists Play It, and is out now.





Codemasters Honored

Founders of Codemasters, Richard, David and father Jim Darling, have all been honoured recently by the UK computer and videogames industry. At the industries annual dinner the father and sons, who formed the company in 1986, were presented with the ELSPA Hall of Fame award.

Richard and David were teenagers when they launched Codemasters with father Jim acting as Chairman. The brothers had already been creating games for some years, firstly selling via mail order before working as developers for publishing companies, which provided the funds to form Codemasters in 1986. Since their first release 'BMX Simulator', Codemasters has had over 60 number one best-sellers and published some of the games industries most popular titles. David Darling, CEO of Codemasters said "We're honoured to receive the award. We've always been passionate about creating games and to be recognised by ELSPA is immensely pleasing".

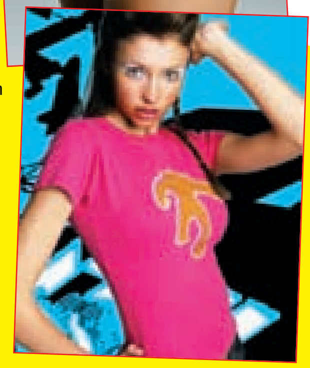


Fashion Victims

We've come a long way (baby). Games are in fashion – literally. No longer the preserve of the spotty kid with a pasty pallor even Steve Davis would snigger at, suddenly the world is realising what we've always known – games are cool! And now you can wear your obsession with pride. Fashion labels are springing up all over the place, each desperate to cash in on the craze, but in our opinion none are doing it with more style than the Joystick Junkies (**www.joystickjunkies.com**).

With a whole range of eye-catching t-shirts (and yes, hotpants!) that you really wouldn't be ashamed to be seen wearing down your local roller disco, there's something for everyone – from Space Invaders to Defender and all the way up to perhaps the greatest video game ever, the mighty Sensible Soccer. And all at more than reasonable prices. So get along to their Web site for a look and smarten yourself up!






1
your hands on a
Spectrum 128
128K



>Sinclair Researched.

We simply couldn't launch a retro magazine without running a feature on the Sinclair range of computers. John Southern, our resident Sinclair expert, looks at every model, from the ZX80 to the QL, and brings us up to date with what's happening in the Sinclair scene right now

The ZX80

In the beginning

It all really got started in January 1980. This was when Sinclair Research announced a new computer engineers had been working on since May the previous year. The Sinclair ZX80 came to life in February, when the first kits started to sell at computer fairs. This was not Clive Sinclair's first venture into selling computers; his previous MK14 kit had sold well, but nothing like the demand for the ZX80. In total, some 50,000 of these first stepping stones to modern computers were sold. Not as many as you would perhaps imagine, but enough to start the computer craze in the UK.

In white moulded plastic, the ZX80 could be bought in kit form (£79.95) or pre-built and ready to run (£99.95). Advertising in major national newspapers brought the computer to the attention of many who saw it as the future and something educational to buy for their children. Sales took off and hundreds of children throughout the country got their first taste of BASIC programming. However, all was not as you would expect. The ZX80 could only do integer mathematics. Decimal points where unheard of. Although this sounds strange today, the Sinclair BASIC, which was written by John Grant of Nine Tiles, had to be squeezed onto a 4K ROM chip. The machine's limited memory was a real drawback and very soon, Sinclair started to sell 3K RAM expansion packs. As prices for memory started to fall at the beginning of the 80s, Sinclair later brought out a 16K expansion module. Around the world, the ZX81 price mark broke barriers at $199 in the USA and Dmk 498 in Germany.

Version 2.0

1981 saw the release of Sinclair's improved ZX81. It was launched in March, in a blaze of television and media publicity. Similar in looks, the black-cased ZX81 had hardware mainly designed by the ZX80 designer, Jim Westwood. The upgraded 8K ROM finally had a decimal point for its mathematics routines. For those who had bought a ZX80, they could buy an 8K ROM upgrade, although it was the end of Autumn before the final maths bugs had been sorted out. The new machine retailed for an unprecedented £69.95. This low price was mainly due to the Ferranti-produced ULA (Uncommitted Logic Array) which reduced the number of components and, therefore, the overall cost. The ZX80 contained 21 chips, whereas the ZX81 contained just four chips, including the RAM and processor.

The ZX81 possessed 1K of RAM, but for £29.95 you could purchase a 16K RAM pack. However, these expansion packs had one major design fault. To save money, the computers did not have a socket for expansion. They relied on the circuit board itself. Copper circuit tracks ran to the edge of the board. The expansion packs had to grip the original board and make a connection. During

>Official add-ons.

The Sinclair ZX Printer came to market in time for Christmas 1981, costing a very reasonable £49.95 (this later rose to £59.95 because of rising production costs). At the time, 9 pin dot matrix printers typically sold for £200 to £300. The printer used aluminium coated black paper. The stylus was electrically charged and this burnt away the aluminium, leaving the black paper to show through. At 32 characters wide (about 4in), the black on silver output was mainly used for printing program listings. The printer may have been cheap, but the paper was not, costing £12 for five small rolls. Fortunately for businesses attempting to use the ZX81, third party manufacturers produced interfaces that allowed a standard Centronic printer to be connected. By the time the Spectum arrived, the ZX Printer had almost been phased out, but it could still be connected to the new computer.

1983 saw the launch of the Sinclair Interface 1. This was a small expansion module that raised the back of the spectrum. Along with two 100 baud network ports and a real RS-232-C port for either printers or modems, the Interface 1 had a new connection port. This port allowed the connection of up to eight Sinclair's Microdrives. The ZX Microdrive was a cheap mass storage device using an endless loop of 1.9mm video tape. Each unit was priced at £49.95, although £79.95 got you one plus the Interface 1. Between 85k and 100K could be stored on a cartridge, and at 15k per second, that meant that games could be loaded very quickly. At the time it was seen as a cheap, reliable form of storage, but the new 3.5in disks slowly ate the market and third party manufacturers produced floppy drive interfaces.

The Sinclair Interface 2 was also released in 1983. This was Sir Clive's answer to the boom in console sales, and the small unit (priced at £19.95) contained two joystick ports and a ROM cartridge slot. Several cartridge games were released, including a quartet of classics titles from Ultimate, but they were priced at £15 each! Granted, they loaded quicker than their cassette-based counterparts, but who would pay three times more for that privilege? Another blow was that the ROM cartridges could only store 16K games, so the growling library of 48K games was not supported.



the design phase, this was reasonable, but in practice, the memory expansion was prone to lose some contact, so your carefully typed-in program was at risk if anything was to knock the pack. And as the keyboard was nothing but a membrane, it was possible to press a key just a little too hard and the whole machine would move enough to crash. Although a major headache for users, this did lead to the creation of many a small company, attempting to solve the problem. These solutions ranged from blu-tak or velcro fasteners to metal strips and screws which bolted onto the expansion pack.

The ingenuity of users started to show too. Tired of a black and white television screen? Just buy a sheet of green plastic film and you have a green screen monitor just like the expensive business computers! Hardware peripheral manufacturers sprung up in almost every garden shed, which was remarkable because most *were* garden sheds. Memory could be added to a massive 1Mb, although this relied on memory paging. Memotech produced a hi-resolution expansion box. Moving-key keyboards were popular, along with joysticks and even digitising tablets.

Gathering pace

The success of the ZX81 snowballed. After sales reached a certain point, there were enough young wannabe programmers desperate to make the next big selling hit. These programs increased the software catalogue and so in turn persuaded others to buy the machine. Christmas 1981 saw thousands of parents spending the whole of the festive season trying to get the level on a tape recorder just perfect to be able to load in a program off a cassette tape.

Magazines sprung up quickly to try and cater for the demand, with many printing program listings. Nobody thought it was strange to type in a hexadecimal computer listing that was an obvious photocopy from someone's Sinclair thermal printer, save it to cassette and hope it did *something* useful before the machine crashed and lost everything!

Pre-recorded software was the wise alternative. The Sinclair ZX Software arm produced a range of cassette-based teaching aids but these were not successful. Games, however, did rule. With its very limited graphics, it was possible to play Space Invaders as long as you had no problem pretending the chunky graphics were alien-like. There was some innovation though, with 3D Monster Maze being one of the original first-person adventures.

Within two years, over one million ZX81 computers had been sold, some 300,000 via Sinclair's own mail order service. Of course, some people never give in. You can still buy original kits, so never mind collecting, start using! The ZX Team are a user group of (friendly) fanatics who still support the ZX80/81 and their clones. Fancy making a portable? Visit their site (**www.zx81.de**) and go to the projects page.

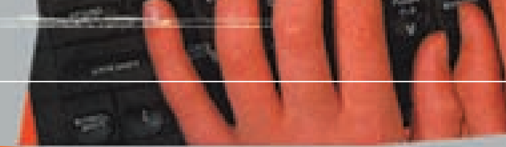




A selection of official Sinclair peripherals







The ZX Spectrum

The glory days

Having turned the nation into a computer literate frenzy, 1982 saw Sir Clive Sinclair reach a pinnacle. He had been snubbed by the BBC, who chose Acorn Computers (set up by Chris Curry who had once worked for Sinclair) to build a computer endorsed by the national TV broadcaster. At £400, the Acorn BBC models A and B were a little beyond the reach of most, and Sinclair planned his revenge. In another glare of camera lights, he announced the new Sinclair ZX Spectrum. The first noticeable feature was colour. Then there was the price. £125 bought the 16K RAM version or £175 for the 48K model (within six months, the 16K model dropped to £99.95, making the first colour computer available for under £100). Although not equipped with all the interface ports of the BBC, the price difference was to be a huge factor.

At the launch, Sinclair's marketing team had learned some new tricks. They constantly referred to the educational software that would be available; a brilliant move as every child in the country could try to persuade their parents that the computer could help with school work. What parent could take the chance that their child could be left behind? The first few days saw such a buying frenzy that the Sinclair mail order department could not keep up with demand. These delays were to become part of folklore and the mail order department was never able to shake its less than stellar image.

Almost immediately, industries sprung up to support the Spectrum. Magazines were launched, software companies created almost nightly, and hardware add-ons flourished. Most people bought the 16K version as you could later upgrade to 48K by slotting in extra RAM chips for about £50. Programmers had by now spent two years learning how to cram code into 16K. This was the machine they had been waiting for.

After Christmas, school playgrounds became a battle field of rivalries. Parents who had paid extra to buy a BBC or one of the newly imported Atari computers found their child outnumbered by the Spectrum-owning kids. This rivalry intensified with each new machine launched, forcing the owners to become inventive in their programming. Other computers could boast better hardware features and facilities. Spectrum users made up for this by using brilliant software hacks. Every time a new program hit the shop shelves it was eagerly bought and carefully reverse-engineered to learn just how the programmer had implemented the new features. Disassembler programs were common, and no-one thought anything wrong with taking other programmer's code to pieces in pursuit of learning.

Profit from piracy

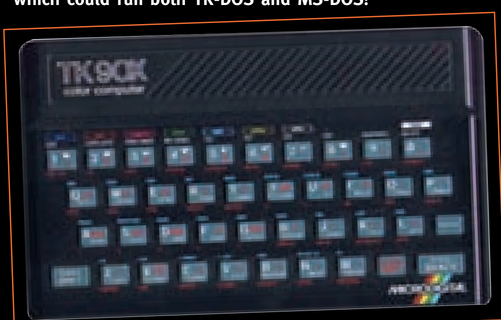
No-one worried about reverse engineering because a much bigger existed. Software was sold and stored on cassette tape, and any child could connect a

>Sinclair overseas.

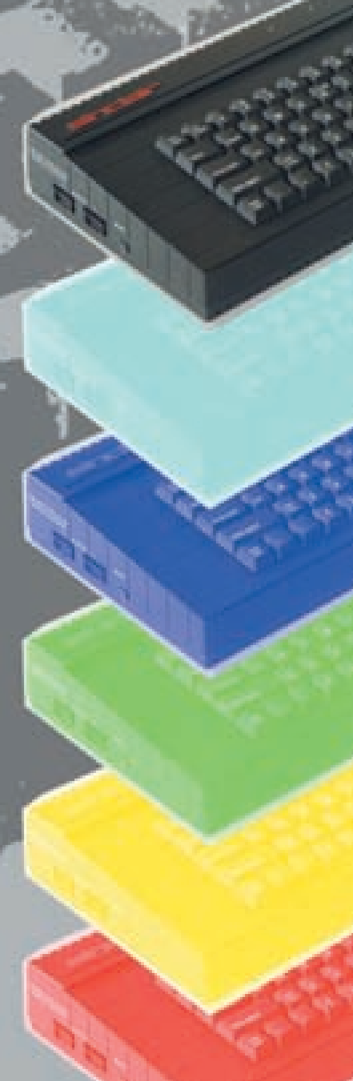
Starting with the ZX81, the machines were being manufactured by the American Timex company in their Dundee factory. This gave Sinclair a way into the American market. Timex re-badged the ZX81 and Spectrum and sold them in the States as the TS1000 and TS2000 respectively.

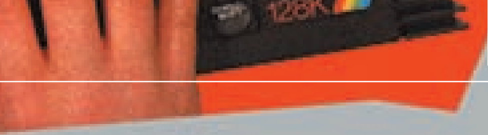
Other countries saw the success and a few started to make their own cloned versions. Brazil and Argentina were not part of the official Sinclair distribution and many unofficial clones were produced. These ranged from the MicroDigital TK82 clone of the ZX80 to the Argentinean Czerweny Electronica CZ2000+ Spectrum clone. Hong Kong followed with a Spectrum derivative called the Lambda 8300. However, most clones came from behind the iron curtain. The cold war meant that Sinclair could do little about copyright. From Slovakia came the Didaktik Gama. It is actually still possible to find versions for sale, with the Didaktik Kompakt having a built-in disk drive! Russia naturally went a little further and produced the Hobeta or Hobbit Personal Computer in Leningrad, with a high degree of compatibility and a considerably improved spec: 64K RAM, dual 5.25in disk drives, three joystick ports, both TV and RGB monitor output, parallel and serial ports. It was mainly sold for use in Russian schools.

The ultimate Spectrum though was the Scorpion ZS-256 – a Z80B 7Mhz CPU with a huge 256K of RAM. It came with a disk drive controller and TR-DOS. More recently in 1996, an upgraded Spectrum called the Sprinter arrived, which could run both TR-DOS and MS-DOS!



MicroDigital released a whole host of unofficial Spectrum clones





couple of tape recorders together and run off a copy or two. You could buy the latest game and within a day, have swapped it at school for dozens of other games. Although illegal, everyone knew that you could quickly have a huge library of programs. Buy a Spectrum and stock up on C90 tapes, and you could end up with hundreds of the cutting edge programs for a fraction of the price compared to BBC owners. Acorn hit back the only way they could – by introducing add-ons such as 5.25in disk drives. Sadly these were so expensive that third party manufacturers produced their own, adding to confusion over single or double sided and single or double density. Spectrum users just bought double tape players – so their parents could also copy music – and more C90s!

The early days saw a host of innovative games as each new feature of the Spectrum was discovered. Having thousands of bedroom programmers meant that the market was ruthless. Thousands of games were written, and as piracy was rife, only the very best sold. For all of the features of modern computer games with extensive graphics and dialogue, the ultimate test is playability. Limited hardware meant that, to survive and make a million, the games had to grab your attention and be instantly playable. The list is impressive. Early success came to companies like Imagine, with tales of young programmers earning thousands. After its spectacular collapse, many left to form other companies such as Ocean. Probably the best known software house was Ashby Computer Graphics which traded under the name of Ultimate Play The Game. It produced classics such as Jetpac, Atic Atac and Knight Lore. As a typical game took some six minutes to load, it soon became common for a splash screen to be loaded before the rest of the program. Many software houses at the time hired artists just to produce these images, which due to the limited palette and resolutions, were in fact real works of art.

Third party hardware manufacturers flourished, and fought to out do one another with inventive add-ons, including graphics tablets, full-sized printers, alternative storage media and, due to the popularity of games, joysticks. Where the rival BBC had analogue joysticks requiring expensive potentiometers, the Spectrum made do with cheaper contact switches.

When it came to the keyboard, Sinclair had learned valuable lesssons from the previous computers. The flat membrane keyboards had been poorly thought of, and in an effort to reduce cost but improve features, the Spectrum used a membrane as the contacts, but this time had rubber blocks for the keys. The 'Dead Flesh' keyboard gave a little response back, but many add-on keyboards were developed and sold. With so much potential for third party fixes, the system was as cheap as you were willing to pay. You could live with the basic model or spend as much as your piggy bank could afford to buy yourself a better computer.



>super spectrum.

No, not the SAM Coupe, but rather the Spectrum +3e. This souped-up Speccy is the work of Garry Lancaster. He's basically upgraded the +3 ROMs, fixing bugs and adding new features. The improvements range from the small (you can now change the colours in the editor) to the significant (the introduction of user-defined text windows). Best of all, the enhanced ROMs allow you to connect a standard IDE hard drive to your Spectrum +3 (or +2A)! Obviously you need to construct a suitable interface, but if your soldering skills are up the scratch, the new software will do the rest. It's even possible to build an interface that plugs directly into the Z80 socket, so the connector sits neatly inside the casing. Lancaster reports that he's connected drives as big as 8Gb, and he sees no reason why you can't connect even bigger drives. For more information about the Spectrum +3e, including details on how to upgrade your ROMs with the new code, visit Garry's Web site at www.zxplus3e.plus.com.



Upgrade your Spectrum +3 to support a standard IDE hard drive

Broadening the range

Sinclair was on a roll, with Spectrums being shipped as fast as they could be made. The Prime Minister, Margaret Thatcher, presented one to the Japanese leader, and Clive Sinclair was knighted in 1983.

In October the following year, the Sinclair ZX Spectrum+ was produced. This was similar to a software patch. It was still the same machine but had a working keyboard, where the keys actually moved. By 1985, sales started to slide and so the Spectrum+ was again improved to produce the ZX Spectrum 128. This new machine had the keyboard of the Spectrum+ and a new sound system, with three channels and seven octaves, plus the ubiquitous 128K RAM. The new 128 BASIC did away with the one-touch entry system of the original version, although you could still switch to 48K compatibility mode if needed. Britain finally saw the model in February 1986, but by then Sinclair was on the way out. A few months later, Amstrad took over Sinclair after the company sustained heavy financial losses, accredited to the doomed Sinclair C5. The Spectrum 128 was soon dropped as Amstrad consolidated the operation, making it something of a rarity today.

In 1987, Amstrad sold the Taiwanese-manufactured ZX Spectrum +2. This was basically a Spectrum 128 stuffed inside Amstrad's own CPC 6128 case. With the built-in tape player, it was perfect for playing games and marketed more as a console than a computer (early packs even came bundled with a light gun). Development continued but at a slower pace. 1988 saw the release of the Spectrum +3. This was basically a +2 with a built-in disk drive replacing the tape player. It also included an upgraded version of BASIC, complete with new disk operating commands. At £250, the +3 was not a big seller. This was partially due to the unusual choice of disk format. Amstrad opted for its own 3in disk drive rather than the standard 3.5in floppy drive that is still used today. The +2 was still popular though, and the upgraded +2A model also appeared in 1988. This was basically a +2 with +3 BASIC, and a port to connect a standalone disk drive that was never released. This model outlived the +3 and remained on sale well into the early 90s.

The Sinclair QL

Sir Clive gets serious

Riding on the wave of success from the ZX Spectrum, Sinclair decided that the business market was the next big thing. This time, it was not to be a super Spectrum, but rather a leap forward. The Sinclair QL (Quantum Leap) was marketed as the first 32-bit business machine to retail for under £400.

The first improvement was the memory. Chip prices were slowly falling so 128K on-board was possible. Ending Sinclair's use of the Z80 processors, the QL used the new Motorola 68008 chip, although once again with only a 16-bit bus. The ability to connect a real computer monitor or television offered the best of both worlds, while the twin Microdrives would provide rapid storage for programs and data. How could it go wrong?

The launch was dogged by the fact that the hardware was not quite complete. The new QDOS operating system did not fit into the ROM and so initial models had a 'Dongle' circuit board. This was complicated by a disastrous mail order arm

>Software support.

Every QL was sold with four business programs written by Psion, who itself went on to produce handheld computers. Quill was the standard word processing package while Archive was a database, capable of real business use and scripting. Abacus introduced spreadsheets, only to be let down by Easel for graphical output. This was not really down to the software, but the fact that QLs only had four colours (Black, White, Red and Green) made graphics somewhat limited.

Games did not take off for the QL, which was both its downfall and its saving grace. Without games it failed to hit the mass market. No games meant that it was used in businesses throughout the country and further afield. Software was written and is still being improved. The latest commercial software, released just a few weeks ago, is called Launchpad. This is a program launcher and general GUI for all the differing operating systems.

The Z88

After Sinclair had been bought by Amstrad, Sir Clive was not quite out of the market. He formed Cambridge Computers which manufactured the very portable Z88. This was really a follow on to the Grundy NewBrain designed by the Sinclair Radionics company, which was released in 1980 and would possibly have been the BBC computer had ownership not changed before launch. The Z88s are still favoured by some researchers as the rubber keyboard is silent, so it can be used in libraries and recording studies throughout the world. Oddly, the operating system is very similar to that of the Acorn BBC.





which failed to supply machines. The independent user group (QUANTA) was formed before anyone managed to get hold of a machine and even produced a magazine before machines were shipped. At the same time, the 3.5in disk drive arrived. Previously, the Microdrive was seen as a viable alternative to cassette tape, capable of holding 100K on each continuous loop of tape. Drives of 3.5in killed this idea so that very soon, any self-respecting QL user had upgraded by adding a third party disk interface.

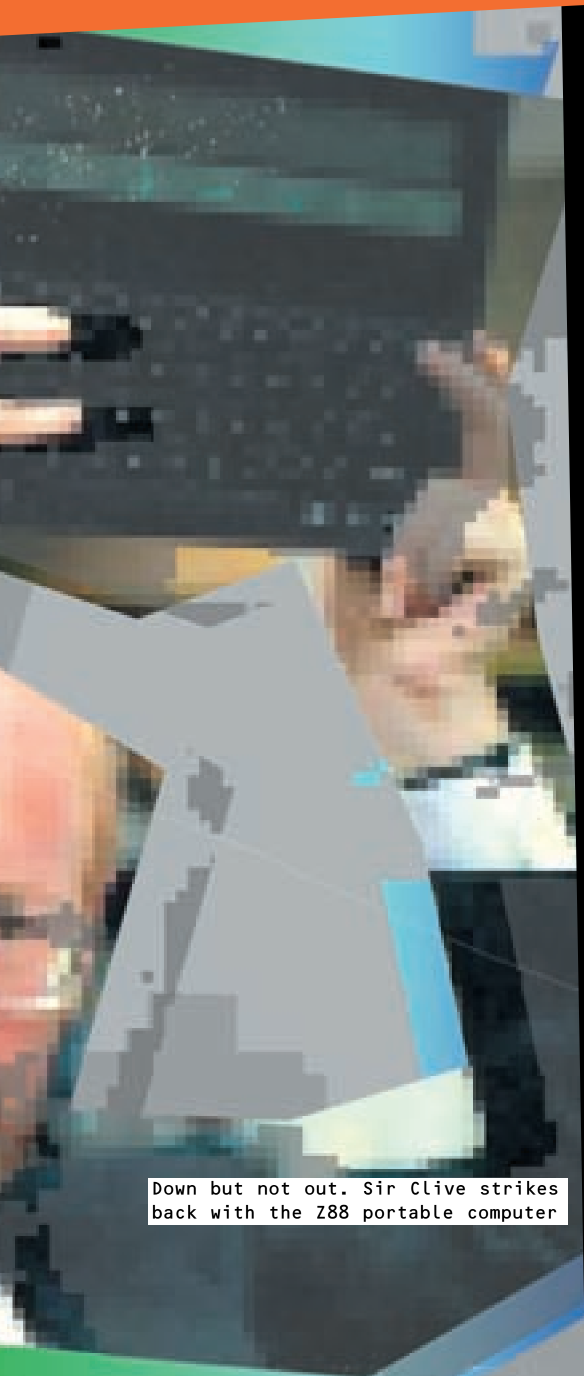
Launching the Sinclair C5 tricycle around the same time did not do the name of Sinclair any favours. Slowly, the rise of the Intel/IBM PC eroded the market. Over 100,000 QLs were eventually sold. BT, with Merlin, produced a clone called the Merlin Tonto, and ICL, which later became part of the Fujitsu empire, made a version called the One-Per-Desk. These two models had built in telephones and modems along with being made in a dark beige colour, rather than the now standard Sinclair black. Other compatibles followed including the CST Thor. By 1986 Sinclair's fortunes had reduced to the state where Amstrad took over its business. Amstrad, ever one to market a good idea, stopped production of the QL and focused on improved versions of the Spectrum.

The QL lives!

The network sockets never worked as stated, but the added RS-232-C ports did leave an opening for attaching a modem as well as a printer. Cheap 1200/75 baud modems allowed many people to use bulletin boards for communications. Online communities developed and dedicated users grouped together. Just like a PC has evolved from an XT to the modern 3GHz machine, the QL has since evolved both in hardware and software. The user group is still going strong, with monthly meetings in various parts of the country.

After disk drive interfaces and memory expansions, the QL really took the hearts of its users with accelerator cards from Miracle Systems. Upgrading the processor and RAM was then usually followed by ROM changes. Full keyboards, mice and proper disk drives followed. Never mind 1.44Mbs per disk – later QLs used ED disks capable of storing 3.2Mbs each! Hard drives eventually came and the latest models now being produced are the Q40 and Q60, which use faster processors and are housed in standard PC cases. These can run either the QDOS operating system or Linux.

QDOS survived because the SuperBASIC was more like a Pascal language in some respects. Multitasking was the norm. Improved ROMs became available along with additional software toolkits. Finally, a replacement operating system was produced which is now called SMSQ/E. RG*



Down but not out. Sir Clive strikes back with the Z88 portable computer

>Sinclair model specs.

ZX80
NEC 780C-1 (Zilog Z80A compatible)
3.25MHz
4K ROM
32x24 characters
64x48 (Quarter Character blocks) graphics
Black and white via a UHF TV aerial adapter
No Sound
Microphone and earphone sockets at 250 baud
Expansion bus
Touch-sensitive, smooth-membrane keyboard

ZX81
NEC 780C-1 (Zilog Z80A compatible)
3.25MHz
4K ROM
32x24 characters
Black and white via a UHF TV aerial adapter
No Sound
Microphone and earphone sockets at 250 baud
Expansion bus
Touch-sensitive, smooth-membrane keyboard

ZX Spectrum
3.54MHz Zilog Z80A
16K or 48K RAM
32x22 text 256x192 8 colour graphics
1 channel 5 octave range sound
Dead Flesh Keyboard

ZX Spectrum+
3.54MHz Zilog Z80A
48K RAM
32x22 text 256x192 8 colour graphics
1 channel 5 octave range sound
Tactile Keyboard

ZX Spectrum 128
3.54MHz Zilog Z80A
128K RAM
32x22 text 256x192 8 colour graphics
3 channel 7 octave range sound
Tactile Keyboard
Joystick ports
RS-232-C
Midi Out

ZX Spectrum+2/+2A
3.54MHz Zilog Z80A
128K RAM
32x22 text 256x192 8 colour graphics
3 channel 7 octave range sound
Tactile Keyboard, Grey casing
Built-in tape recorder
Joystick ports
RS-232-C
Midi Out

ZX Spectrum+3
3.54MHz Zilog Z80A
128K RAM
32x22 text 256x192 8 colour graphics
3 channel 7 octave range sound
Tactile Keyboard
3in disk drive
Joystick ports
RS-232-C
Midi Out

Sinclair QL
7.5 MHz
Motorola MC68008P
128K RAM
48K ROM
42x25 text, 256x256 8 colours, 512x256 4 colours
2 joystick ports
2 RS-232-C ports
TV and monitor connections
2 100K Microdrives
2 network sockets





>return of the rings

From simple arcade games to complex adventures and sprawling battle sims, The Lord of the Rings has been a major source of inspiration for software developers for over 20 years. Martyn Carroll sets off on a journey to uncover the many games based on Tolkein's epic work

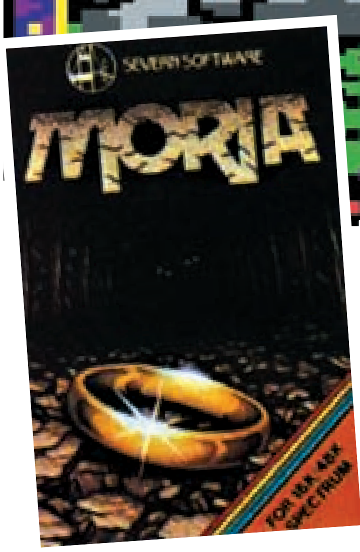
With The Return of the King movie still raking in cash at cinemas up and down the country, and the extended DVD release due in November, it seems that no mere mortal will be able to escape the Lord of the Rings for the foreseeable future.

You won't find respite by playing videogames either, because EA has recently released its Return of the King tie-in and are following it up later in the year with Lord of the Rings Trilogy, a game based on all three films.

In a separate licensing deal, Vivendi Interactive are also releasing PC games based on the original book; the War of the Ring is out now and The Battle for Middle-earth is due out in the summer. The games are coming thick and fast, but it's not the first time players have stepped into the shoes of their favourite Tolkien character and walk the world of Middle-earth.









Two early games that were loosely based on The Lord of the Rings

The bold and the not so beautiful

Back in the early 80s, long before the fledgling computer games market could be classed as an industry, publishers could not justify licensing costs so they dreamt up unofficial yet blatant titles. Games with titles like Return of the Jedy and Invasion of the Body Snatchas were common place. In 1982, Postern Software released the more subtly titled Shadowfax, an arcade game named after Gandalf's horse. Originally released on the Vic 20, and later appearing on the Spectrum and C64, the game saw the player ride the titular beast into battle against a never-ending stream of Black Riders. By hitting the fire button you could zap Sauron's servants with well-placed lightning bolts. There was no level structure as such, and the riders just kept on coming, making Shadowfax something of a one trick pony. The animation of the horses was excellent, however, being based on Eadweard Muybridge's famous photographs.

Shadowfax is a solid gold classic when compared to Moria – a game released in the same year on the Spectrum, C64 and Oric-1. You played Gandalf in this too and your aim was to retrieve Durin's ring from the mines of Moria. It sounded intriguing until you realised Moria was depicted as a 11x11 square grid and your position was marked with a letter G. As you moved from square to square you would stumble upon enemies. Here you could choose to fight or run and that was about as interactive as the game ever got.

As Moria shows, developers were never going to successfully visualise Tolkien's tale with these primitive machines, so the best games came in the form of text adventures. These games where often characterised by their complexity, although half the time, players struggled with the syntax rather then the puzzles themselves. Many games required you to enter exact phrases to progress, resulting in much thesaurus thumbing.

The very first text adventure, cunningly entitled Adventure, was loaded with Tolkien references. This influential game toured University campuses throughout the 1970s, eventually turning up on home computers (as Colossal Adventure) in 1981, courtesy of Level 9 Computing. By now it had gathered even more Tolkien lore, including trolls, elves and a volcano that was strikingly similar to Mount Doom. The game spawned two sequels, Adventure Quest and Dungeon Adventure, and the three adventures came to be known as the Middle-earth Trilogy. The games were later re-released under the Jewels of Darkness title and all of the Tolkien references were removed. This was no doubt due to the fact that Melbourne House had licensed Lord of the Rings from the Tolkien estate.

Following on from their successful adventure game based on The Hobbit, Melbourne House released Lord of the Rings Game One in 1985 on Spectrum, C64, Amstrad CPC, BBC, PC, Apple II and Mac. The game covered The Fellowship of the Ring (in the US the game was released as The Fellowship of the Ring Software Adventure), and was split into two parts like the book. In what was a first for an adventure



The rather cheeky Middle-earth Trilogy from Level 9 Computing

game, you could choose which character you wanted to play from Frodo, Sam, Pippin and Merry. Your selection didn't make a great deal of difference, but if you managed to complete the game (no small feat) you could play through again from different perspectives.

The game began in The Shire, where you were able to explore the Hobbit's homeland before setting off on your journey to Rivendell. In fact, it was possible to stray from the story and head in the opposite direction, over the Blue Mountains towards the forested planes of Harlingdon and the ocean beyond. So while the game followed the plot closely, it was possible to explore some of the places only mentioned in the book (or included on Tolkien's map of Middle-earth). The game threw in a number of unique plot twists too, so even fans were in for a few surprises. Saying that, at the time of release many fans were disappointed with the game, possibly because an in-depth knowledge of the book was not assumed. The text was riddled with grammatical errors too, making it look like a rushed job rather than a game that had been in development for 15 months. On a more general note, the game cost a staggering £16! However, it did come in fancy packaging with a paperback copy of The Fellowship of the Ring thrown in.

In 1988, Melbourne House released Lord of the Rings Game Two on the Spectrum, C64, Amstrad CPC, PC, Apple II and Mac. It was subtitled Shadows of Mordor and specifically covered book four of The Two Towers, following Frodo and Sam's quest rather than Aragorn's plotline. While not a great departure from the first game, it was certainly a lot more polished, with far fewer typing errors and improved graphics used to illustrate the text. Characters also displayed more independence. They would go off and do their own thing rather than follow you dumbly whilst singing about gold.

The company always intended to release a trilogy of games and the final instalment duly appeared in 1989. Subtitled The Crack of Doom, it covered the events in book six of The Return of the King, climaxing in the ring forging scene on top of Mount Doom. Unlike the first two adventures, you could only control Sam Gamgee but overall the game was a marked improvement over its predecessors. It was only released on the C64, PC and Mac, and rather strangely, the game was never released outside North America, The Tolkien Trilogy, released in 1989, actually consisted of The Hobbit and the first two Lord of the Rings games.

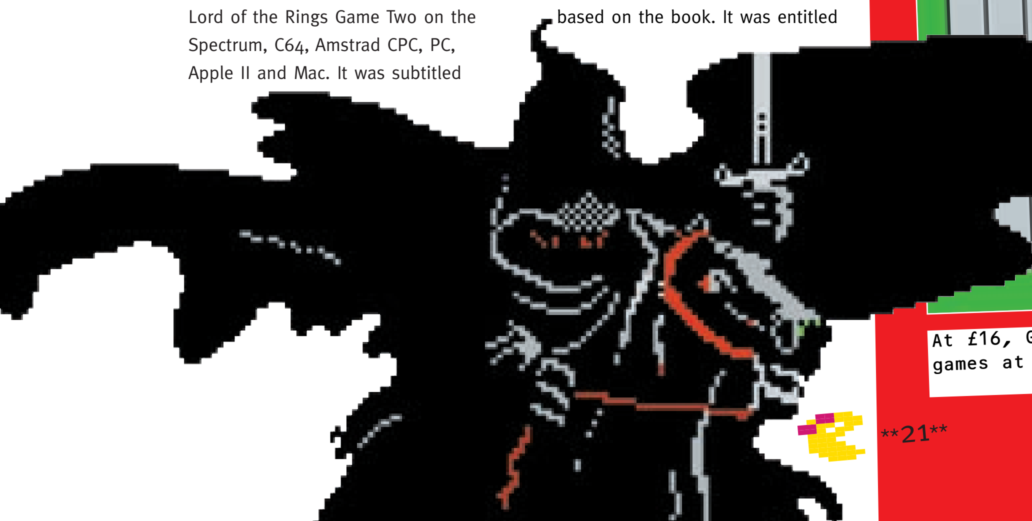
Speaking volumes

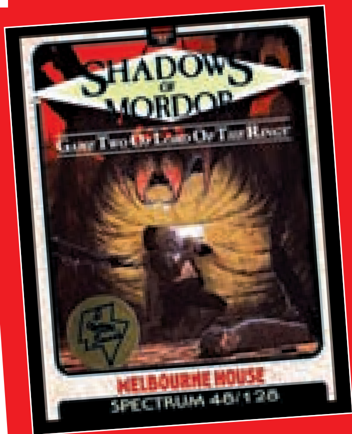
The PC and Amiga were home to the first fully graphical adventure game based on the book. It was entitled

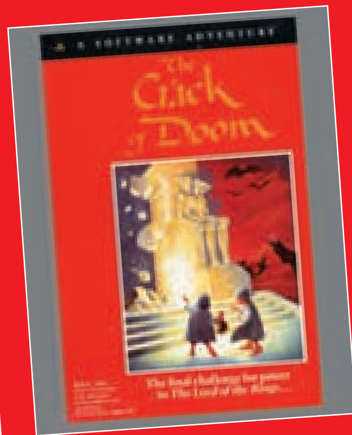


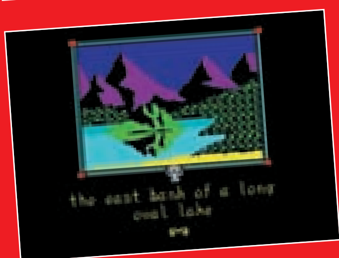


At £16, Game One was almost three times more than standard games at the time!

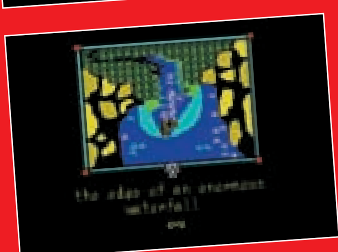














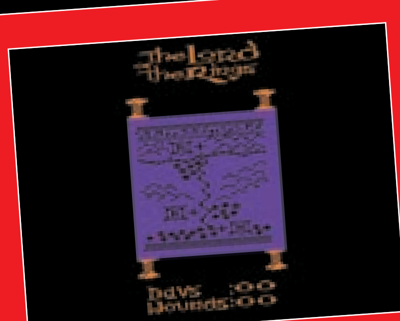
Game Two improved on its predecessor with better graphics and clearer descriptions

The third game in the trilogy was only ever released in the US, making it something of a novelty for UK fans





One of the rarest 2600 prototypes is now available for download

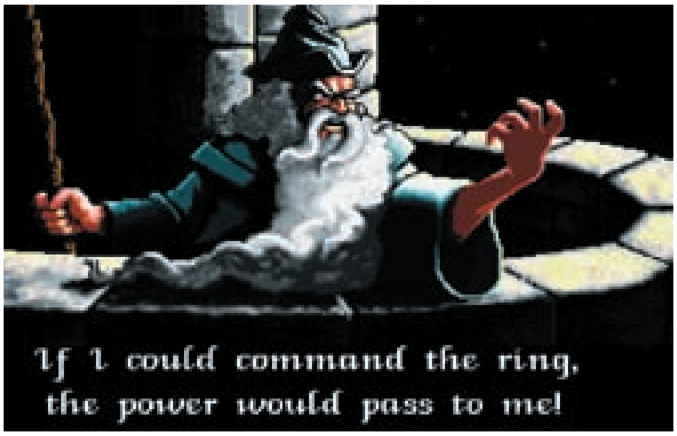


Lord of the Rings Vol 1 and was released by Interplay in 1990. It was similar to the early Zelda and Final Fantasy games in many respects. The action was viewed from overhead and the gameplay revolved around slaying enemies (wolves and wargs at first, spiders and sorcerers later on) and solving tricky puzzles. If you were stumped, you could always gain clues by engaging the local inhabitants in conversation. You started out controlling just a single character (Frodo) but as you progressed you were able to enlist the services of various dwarves, elves and humans. With a party of up to ten in tow, you could stage some spectacular battles later on. Lord of the Rings Vol 1 was an entertaining game which has aged far better than the earlier text adventure. However, like the Melbourne House games, the plot was not too linear, meaning that the player was not forced to complete tasks in a strict order (some tasks could be avoided completely).

Interplay followed up the game with an enhanced CD version (which featured scenes from Ralph Bakshi's animated movie), a SNES version and a very similar PC-only sequel titled Lord of the Rings Vol 2: The Two Towers. The follow-up shifted the emphasis from combat to puzzle solving and was better for it. This SNES version was interesting because while it shared the same name as the PC/Amiga version, it was a completely different game. It supported up to five players for a start, and there were loads of silly errands to run and mind-boggling mazes to explore. You could interact with non-playable characters, and level-up the members of the fellowship, but this was very much a light RPG. The game ended abruptly too, and the proposed SNES sequel never appeared.

The same fate befell the final part of the PC trilogy. Work was well underway on Vol 3 when it was unceremoniously pulled. The third game was to be more of a strategy game than an RPG, and it was very nearly released as part of Advanced Dungeons and Dragons' Forgotten Realms series before it was canned altogether.







The Interplay games used a series of stills to drive the story

Dead and buried?

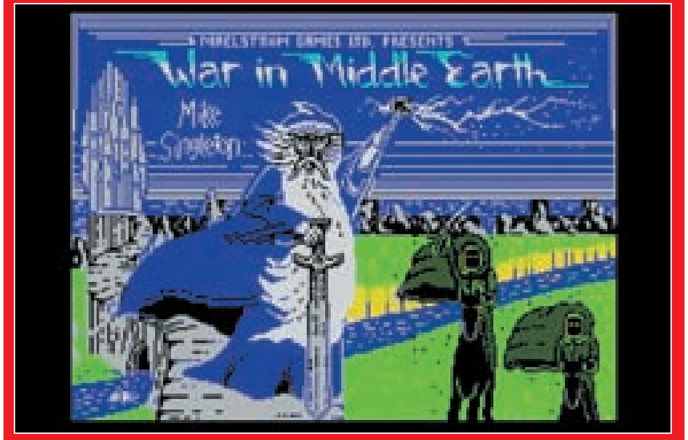
There is hope that Vol 3 may surface some time in the future, especially as a Lord of the Rings game written for the Atari 2600 has recently surfaced. This unreleased prototype, subtitled Journey To Rivendell, was originally scheduled for release in 1984 by Parker Brothers but never materialised, even though box artwork and screen shots appeared in one of their release catalogues at the time. Excited fans who phoned Parker Brothers were told that the game had sold out to cover up the fact that it had never been released. The prototype available on the Web is clearly unfinished, although some gameplay elements have been implemented. For instance, when the black riders attack, you can wear the ring to become invisible and dodge their attack.

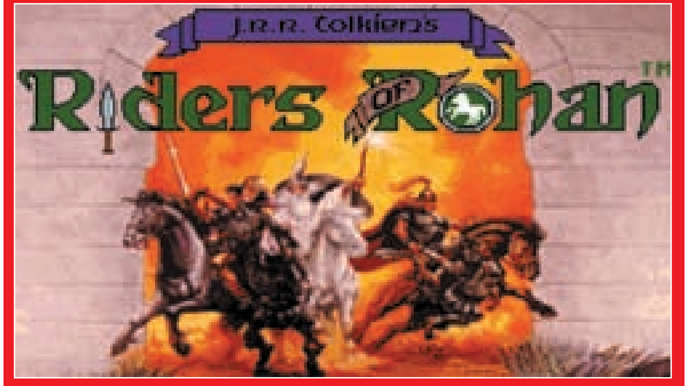
All this is a long way off the licences available now, but then again, both The Two Towers and The Return of the King games from EA are little more than polished versions of Golden Axe. Perhaps we haven't travelled that far after all! RG*

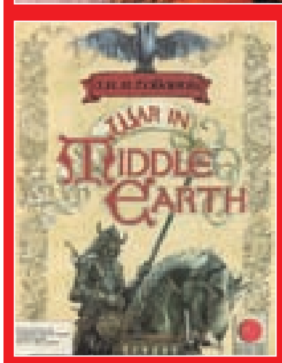
>War games.

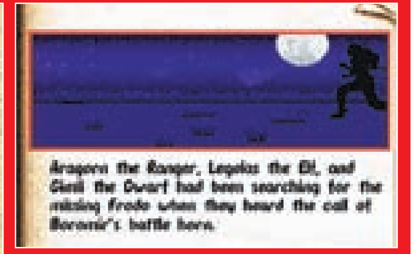
Melbourne House marched out War in Middle Earth in 1988, shortly before the release of The Crack of Doom. This turn-based strategy game was developed by Mike Singleton, author of Shadowfax and The Lords of Midnight (which was heavily inspired by The Lord of the Rings itself). Using an icon-driven interface, you had to guide Frodo and the fellowship from The Shire to Mount Doom. Along the way you would become embroiled in battles with Sauron's armies. The removed perspective distanced the player from the characters, who were, after all, just pixels on a huge playing field, yet the game certainly emphasised the epic nature of the novel. It was ahead of its time too, predating the similar Dune games by at least two years. The game was originally released on 8-bit machines (including the MSX) but later appeared on the PC, Amiga and Atari ST. These later versions benefited from enhanced visuals, including graphic sequences which showed the characters preparing for battle.

Beam Software, the Australian owners of Melbourne House, released Riders of Rohan on PC in 1990. This strategy game was similar to War in Middle Earth and began with the battle for Helm's Deep. There were a number of units you could utilise, including Frodo and Aragorn, but the battle engine was on the simplistic side. Besides making tactical decisions, there were also several action scenes in which you battled against orcs, either firing arrows as Legolas or swinging your axe as Gimli.

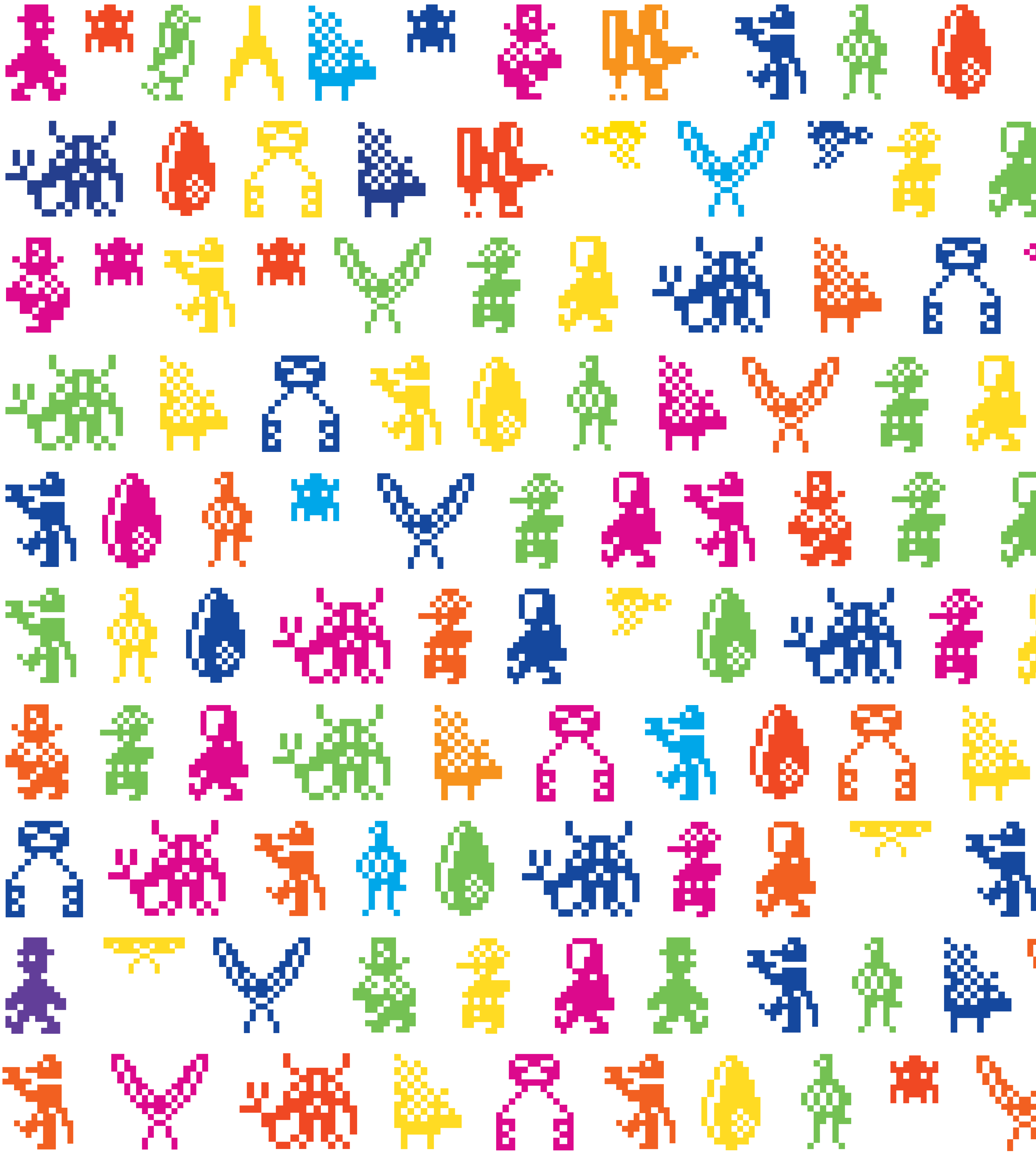


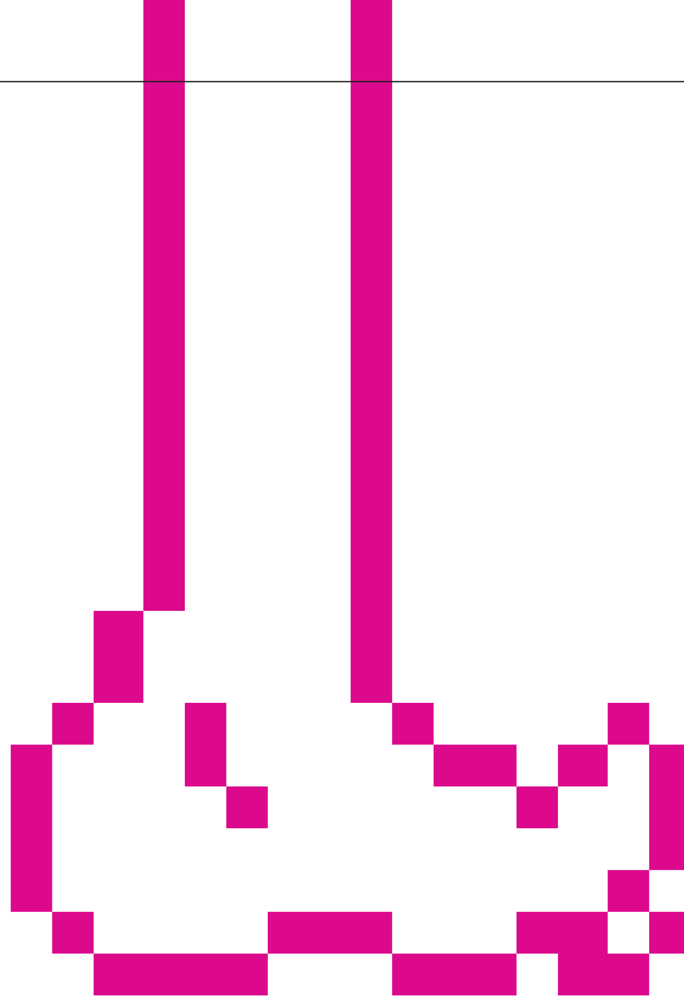


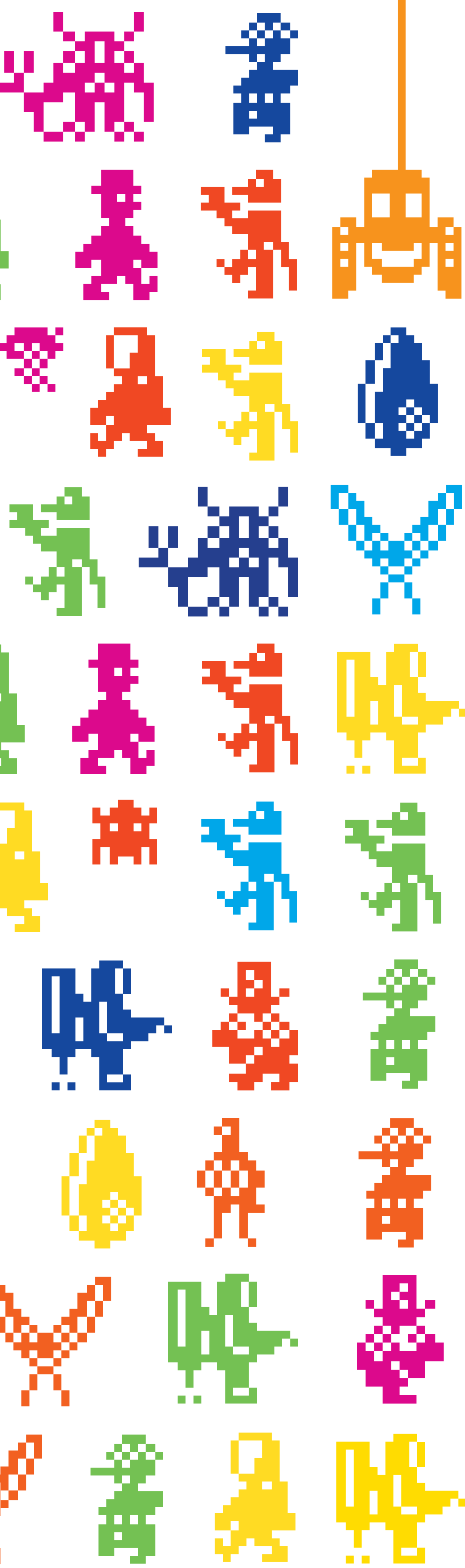




These turn-based strategy sims were a welcome departure from the adventure games

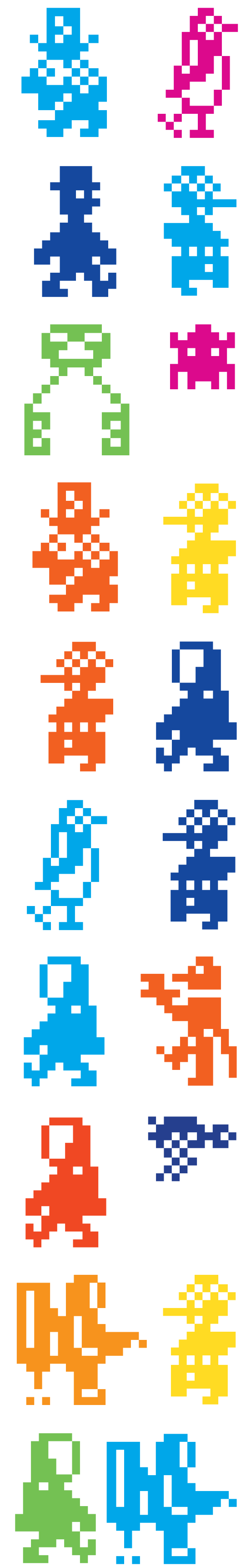






>Hall of the Miner King.

Miner Willy is one of the most recognisable game characters ever, having starred in Manic Miner and Jet Set Willy, two of the most successful and influential games of the 8-bit era. Martyn Carroll takes a walk down Surbiton Way, following in the footsteps of the intrepid explorer



When we first considered putting together a retro magazine, talk about content, readership and the business side of things always led, in a roundabout fashion, to Miner Willy. Nostalgia is infectious, and meetings would be filled with musings about back in the day, when games were good. The frequency with which Miner Willy entered the conversation was alarming. Indeed, talk to any videogame veteran about classic games and they'll nearly always remember Manic Miner and Jet Set Willy with fondness. Miner Willy seems to strike a chord that cannot be ignored. And ignore it we won't.

Manic Miner

Manic Miner was originally written for the Spectrum by Matthew Smith and released by Bug-Byte Software in 1983. Smith was 18 at the time, and it was only his second commercial game (Styx being the first). His main inspiration was a game written for the TRS-80 called Miner 2049'er.

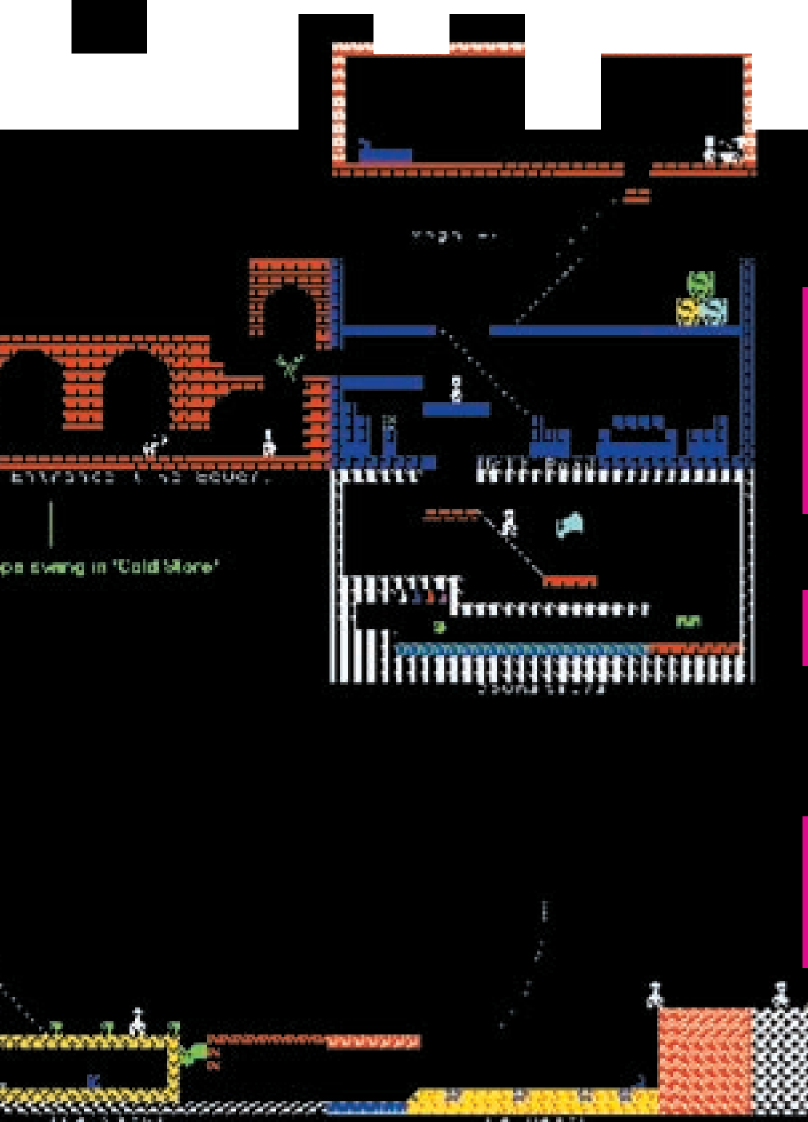
Miner Miner was immediately a huge hit, and perhaps the first Spectrum mega-game. It was released at a time when many Spectrum games were simple affairs, often written in BASIC. In contrast, Miner was a stunningly smooth machine code creation. It was also big, featuring 20 screens, an almost unheard of number. And the best bit – each screen was completely unique, and home to a variety of weird and wonderful enemies. There were no alien ships or ghosts here. Smith introduced clockwork robots, mutant telephones and man-eating toilets!

The game delivered a succession of firsts. It featured in-game music in addition to standard spot effects. Granted, the stunted version of In The Halls Of The Mountain Kings was continually looped, but it worked brilliantly. The game also featured an animated loading screen, with "Manic Miner" flashing as the tape played. Although this was a simple trick using flashing attributes, it was still a first for a Spectrum game. However, Manic Miner is perhaps best remembered for being the first very difficult game! You couldn't complete this in an afternoon. In fact, you probably would never complete it. There was a fair chance you'd lose your three lives before Eugene's Lair, and that was only a quarter of the way through the game. You could cheat, but this prevented you from completing the game properly.

Following the success of Manic Miner, Smith left Bug-Byte and formed Software Projects with two associates. A legal loophole allowed Smith to take Manic Miner with him and re-release it as a Software Projects game. Subtitled Second Edition, the game was virtually identical. A small number of character sprites were changed, and some excellent new inlay art was created, but it was the same game. But fans needn't have worried, as the true sequel was just around the corner.

Jet Set Willy

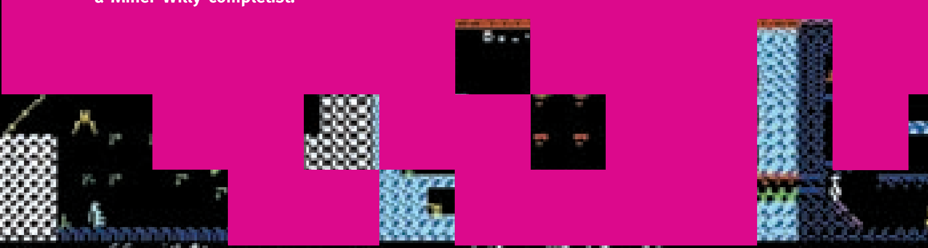
Jet Set Willy was scheduled for a Christmas 1983 release, but it slipped and eventually appeared in April 1984 (this would probably explain why the inlay says 1983 and the tape says 1984).





>Perils of Willy

Neither Manic Miner or Jet Set Willy could be squeezed onto the Vic 20, so Software Projects set about creating a brand new Miner Willy adventure for the Commodore computer. The result was Perils of Willy, a Manic Miner clone with much cruder visuals. The aim was to jump from platform to platform, grabbing musical notes. Collect all the notes and you'd be taken to the next screen. It was a good step back from Manic Miner, and is only worth seeking out if you're a Miner Willy completist.



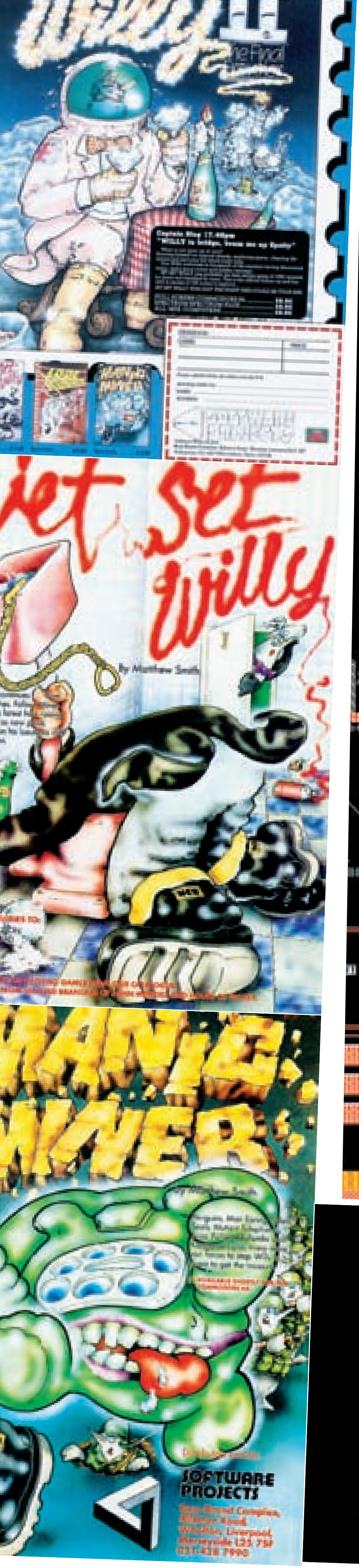
Jet Set Willy was not so much a sequel as a completely new game, in which Willy was let loose in a mansion containing 60 unique rooms. Unlike the original, there was no need to complete one screen in order to move onto the next. You could now explore! If one room looked a little tricky, why not leave it and come back later. If you were having trouble grabbing a tricky object, why not enter the room from the other side. The level of freedom offered was unprecedented, and the sheer scale was unparalleled. Jet Set Willy received rave reviews in the gaming press. Crash magazine called it "a high point in the development of the Spectrum game" and gave it 95% overall.

Like Manic Miner, it was very unlikely that you would ever complete the game, despite the seven lives you began with. Just visiting every room in the game was sufficiently challenging. Software Projects sensed this, and offered a prize to the first person to telephone their offices and tell them how many glasses needed to be collected to complete the game. The winner would receive a case of Don Perignon champagne and a helicopter ride with Matthew Smith. The winners were Ross Holman and Cameron Else, who realised that the game couldn't be completed, because an object in the First Landing couldn't be collected. So you could only collect 82 objects instead of the required 83.

Holman and Else won the prize nevertheless, and Software Projects released a



Manic Miner. Perhaps the only game in existence with three different covers!





series of POKEs that fixed the game. This is generally regarded as the first ever software patch! In order for the POKEs to work, Software Projects disclosed information on how to MERGE the basic loader. This opened up the possibility of changing the game in other ways, and quickly Jet Set Willy became the most hacked game ever. Your Spectrum magazine even included a special feature on hacking the game, including information on how to add a new screen in the place of a previously empty room. In fact, the game's room format was so easy to exploit that two publishers, Spectrum Electronics and Softricks, released Jet Set Willy editors in 1984. These editing tools allowed users to design their own rooms, and many used them to create complete Miner Willy adventures. The best were Jet Set Willy III, an unofficial sequel by Michael Blanke and Arno P. Gitz, and Join the Jet Set, a surprisingly faithful spin-off by Richard Hallas.

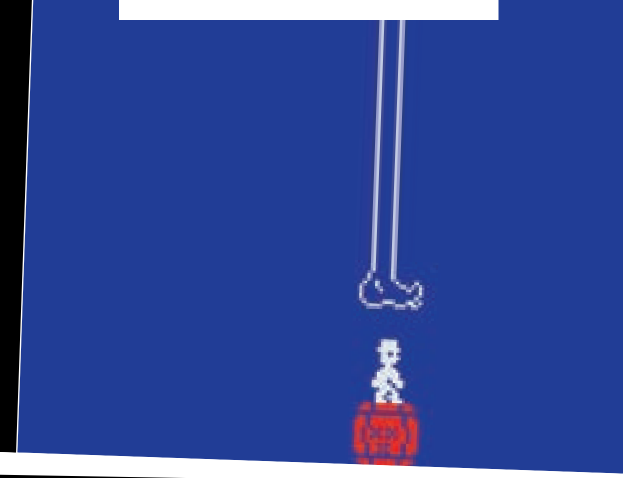
Jet Set Willy topped the charts throughout most of 1984, and rumours about secret rooms and the emergence of new hacks meant that it was never far from the pages of the specialist press. A sequel was inevitable, so it was no surprise when Software Projects announced that Smith was working on a new Miner Willy game. It was to be called the Megatree.

Jet Set Willy II

The Megatree (aka Willy Meets the Taxman) went on to become the stuff of legend. Some rumours suggest that Smith never even started work on the game, while others claim that a single screen was created before Smith walked out on Software Projects,







The foot that squashed Willy was influenced by Monty Python's Flying Circus

apparently after an argument over royalty rates. The fact is that Matthew Smith never wrote a sequel. That job was left to Derrick Rowson.

You can imagine the situation. The fans are crying out for a sequel and the man behind the series has gone AWOL. Software Projects needed something quick, and the solution was Jet Set Willy II: The Final Frontier. Released in July 1985, just over a year after the original, part II is best described as an enhanced version of Jet Set Willy.

Rowson took all 60 of Smith's rooms and added a further 71 rooms of his own, bringing the total number to 131. New rooms are dotted throughout the house, with the majority lying in the rarely-explored area beyond The Forgotten Abbey. However, the majority of new rooms were not in Willy's house at all. In the original game, if you made your way to the very top of the house, and jumped up from The Watch Tower, you'd be looped back around to The Off License. But in the sequel, you'd appear in The Rocket Room. This would then take you to a space ship from which you could beam down to an alien planet.

The main problem with Jet Set Willy II was that the new rooms were largely dull and boring. The author shared little of Smith's imagination, and apart from a few nice touches (Willy in a space suit being one of them), the sequel was something of a missed opportunity. Crash agreed, giving the game 61% overall and saying "Good, but not much progress."

However, the sequel's greatest strengths lay behind the scenes. Smith has squeezed every last byte out of the Spectrum to produce the original, and yet Rowson somehow managed to cram over double the amount of screens inside the 48K memory. To achieve this, Rowson created a compression algorithm that he used to scrunch the size of each screen. On the downside, this made the game much harder to hack, and very few modified versions of the sequel have appeared. RG*

>The Gaping Pit?

Many rumours surrounded Jet Set Willy, with the main ones relating to supposed secret rooms. This seems to stem from a reference in Smith's original code to a room called The Gaping Pit. Imaginations were on fire and the whole thing boiled over when Your Spectrum printed this letter from Robin Daines in issue seven:

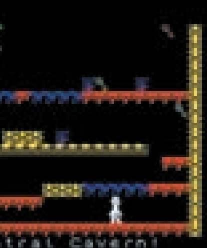
"Seeing your article in issue 4 about Jet Set Willy I felt compelled to write to you about some locations you've missed out. The Gaping Pit seemed the most obvious one, though even I haven't visited it. Secondly, and more importantly, you omitted three major locations; here's how you get to them. Wait on the bow till 11.45pm (Smith time), which may seem an awful long time to you swashbuckling Spectrummers. At that moment, a raft will get tossed up on a large wave and you must then jump on. It takes you to Crusoe Corner (a desert island to us landlubbers). Then you shin up a palm tree to arrive at Tree Tops – The Sequel, from which you catch the bird that travels up towards In The Clouds. From there you can control yourself all over the house (funny things happen when you try to enter the water or the Master Bedroom) and from that point, it should be possible to find The Gaping Pit (though I've not tried it myself). It also clobbers the 'Attic Attack' and makes it possible to go through baddies (fire puts you down where you are, so be careful) whereupon the bird disintegrates."

Your Spectrum countered with a sarcastic reply, about how they themselves had found even more secret rooms, but this was no doubt lost on countless readers, who waited and waited for that raft like Crusoe himself.

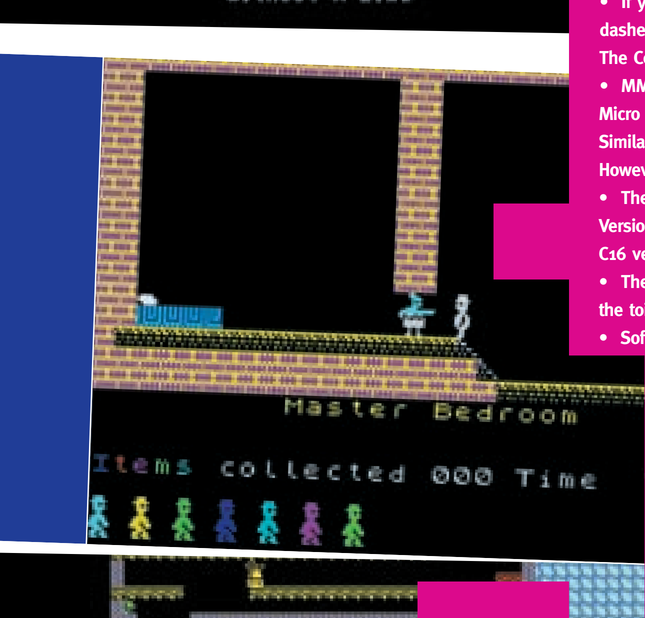
This hoax became so famous that Derrick Rowson actually included the desert island in Jet Set Willy II. If you flick the trip switch, and then make it to The Bow without losing a life, the yacht will take you to The Deserted Isle.

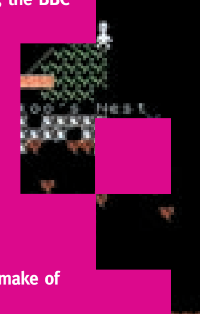
>Surbiton Secrets

- The JSW in-game tune is "If I was a Rich Man" from Fiddler on the Roof, although the version of JSW that appeared on the They Sold a Million compilation features In The Halls Of The Mountain Kings from Manic Miner. JSW II also features the Grieg's movement.
- There's a room in JSW called We Must Perform a Quirkafleeg. In case you're wondering, a Quirkafleeg is an act that involves lying on the floor and kicking your legs out. It comes from a comic Smith used to read called The Furry Freak Brothers.
- In the original JSW, you would die instantly if you entered We Must Perform a Quirkafleeg after visiting The Attic. It seems that the large caterpillar messed up some of the graphics, causing the crash. Software Projects released a POKE for this problem, although they claimed it was part of the game's design! Apparently, after visiting The Attic, Quirkafleeg filled with deadly gas, forcing you to find an alternative route.
- In JSW, the screen Nomen Luni is a mikey-take of the Nomen Ludi legend that appeared on Imagine's plane-shooting game Zzoom. And if you look at that particular screen, you'll see that a plane has indeed crashed into Willy's mansion.
- If you do manage to collect all 83 objects in JSW, Maria will let Willy retire to bed. But as soon as his head hits the pillow, he dashes to The Bathroom and throws up in the toilet! The ending to JSW II is even more devious, because it transports Willy to The Central Cavern. That's right – the first screen from MM. Perhaps it was a recurring dream after all.
- MM, JSW and JSW II were ported to many different machines, with some minor but interesting changes. For instance, the BBC Micro version of MM completely replaced the Solar Power Generator with a new screen called The Meteor Shower. Similarly, the Amstrad CPC version changed the layout of Solar Power Generator but the name remained the same. However, Eugene's Lair was renamed Eugene Was Here.
- The Commodore 16 version of Jet Set Willy only featured 20 screens, even though it was labelled "Enhanced Version". The furthest to the left you could go was the Back Stairway and the furthest to the right was The Bridge. The C16 version of JSW II included over 80 screens, but the game was a four part multi-load
- The Commodore 64 and Spectrum versions of JSW II were identical, expect that in the C64 port you could jump into the toilet at the start and visit several additional screens.
- Software Projects commissioned Atari ST and Amiga versions of JSW in 1989. The company later canned both versions, but the Atari ST version was finished, and has since found it's way onto the Web. It's a very faithful remake of the Spectrum version, although there are two new rooms – Buried Treasure and Zaphod Says: DON'T PANIC!
- Jester Interactive now own the rights to MM and JSW. A jazzed-up version of MM appeared on the GameBoy Advance in 2002, and there are plans to port both games to mobile phones.





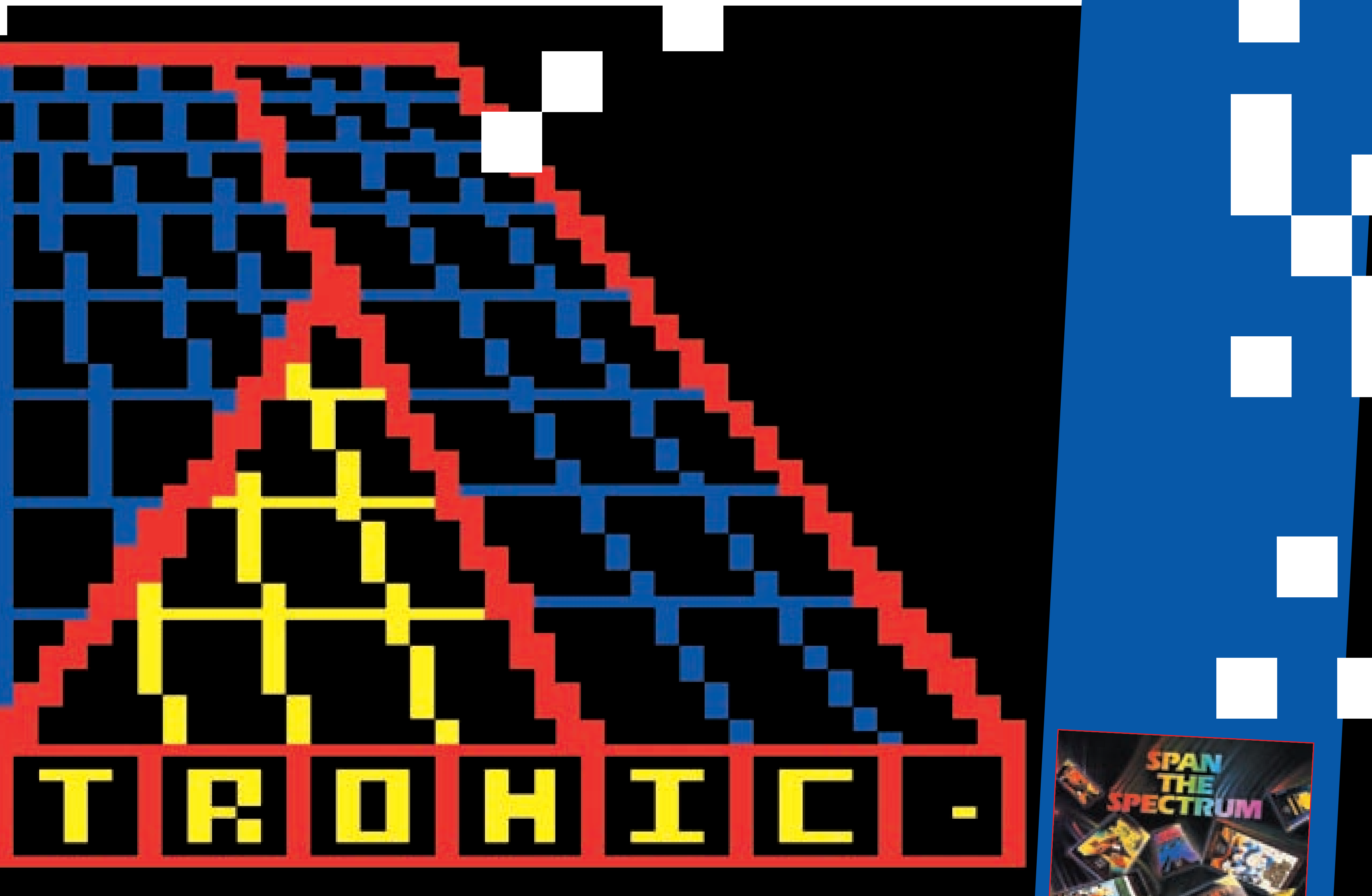




>mastertronic, a history.

It was announced in August last year that Mastertronic would be reborn as a software re-publisher. As its new owners look forward, we take the opportunity to look back at this classic software label. Anthony Guter, employee at the company from 1985 to 1991, takes us back to the beginning, revealing how Mastertronic ripped up the rulebook and redefined the UK software market

Mastertronic was founded in 1983 by Martin Alper, Frank Herman and Alan Sharam. Based in London, the three businessmen had some financial backing from a small, outside group of investors. Unlike many of the company's competitors in the games software market, the company was not set up by programmers seeking an outlet for their creations. Nor was it part of an established business with money to spare, dipping its corporate toe in the games industry's rising tide. Mastertronic's founders committed themselves to succeeding as publishers by selling games as cheaply as possible. Other publishers seemed to be concerned only with the process of creating the software and marketing an image – a strategy aimed directly at the consumer, with the hope that customer demand would somehow bring the games into the shops. In contrast, Mastertronic aimed its strategy at the distributors and retailers. If the games could be put on the shelves then a low



selling price would do the rest.

To this end, the core of the strategy was budget software – games priced at no more than £3, at a time when most decent software was priced at £6 or more. In fact, Mastertronic opted for £1.99 as the basic price. Both Alper and Herman had experience in the video distribution business, and they believed it possible to build up a reasonable market share at this low price. With the strategy in place, the company began trading on April 1st, 1984. It initially operated out of the back room of Sharam's office, in the heart of London's West End.

Trading blows

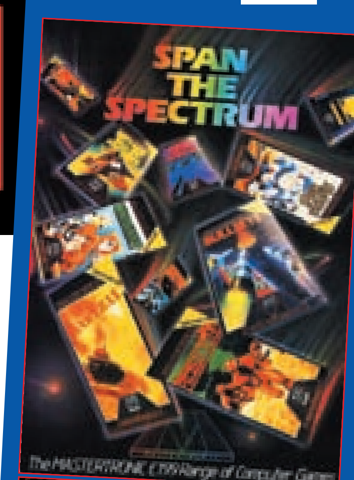
After the infamous videogame crash of 1983, a new generation of cheap, programmable computers emerged. This was led in the UK by Sinclair, with fierce competition from Commodore. At this time, the retail end was poorly organised, with console games being sold through a variety of outlets including electrical stores, photography shops and some of the high street chains. When the console market collapsed, these retailers pulled out. And as there were virtually no specialist games shops, publishers were forced to take out adverts in computer magazines and sell their software by mail order. The problem was one of classification. Were games merely toys, or published products like books and records, or did they rightly belong with consumer electronics alongside the computers on which they ran? There was no obvious answer.

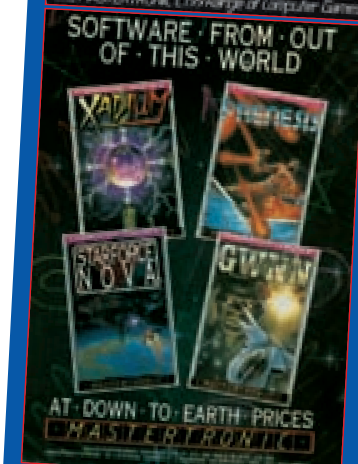
One certainty was that the trade was in disarray. The failure of the first consoles made retailers suspicious. The buyers for the larger high street chains like Woolworths and Boots were confused by the many different types of home computer. They did not know how to cope with suppliers who might produce a good game one month, then nothing but failures thereafter. They were afraid to commit to buying product unless they could be sure of returning unsold stock for a refund, but who knew how long the new games publishers would be in business?

And how the hell do you sell a computer game anyway? A customer could flick through a book, listen to a record, play with a toy. Games were slow to load and needed some understanding which sales staff usually lacked. It seemed crazy to stick a tape into a computer, wait five minutes for it to load and then watch the potential customer play with it for ten minutes before deciding not to buy. Retailers were unsurprisingly sceptical and reluctant to believe there was any money to be made.

Distribution deals

Mastertronic was started by men who understood distribution and marketing. They knew nothing about computer games and were proud to boast that they never played them. When programmers came in with demos, someone would have to set up the machines, load the games and even plug in the joysticks for the directors.



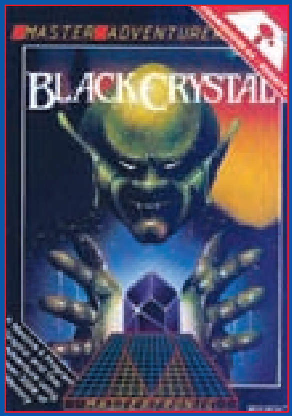


Mastertronic rarely advertised in the specialist press, but there were exceptions

>masterwhat?

Why was it called Mastertronic? As part of a general marketing plan, the word 'master' was to be used with a variety of other words in order to distribute various electrical products. The company briefly published music under the name Mastersound and videos as Mastervision. These were not particularly succesful ventures. It also used the name MasterAdventurer for marketing interactive fiction. This was partly due to a deal with Carnell Software to publish an elaborate adventure game for the Spectrum called Wrath of Magra. Carnell Software fell into financial difficulties and ceased trading in the summer of 1984, although Mastertronic republished two of their earlier releases, Volcanic Dungeon and Black Crystal.

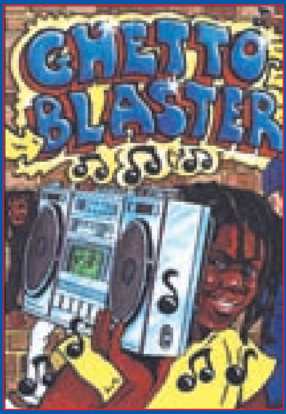




Mastertronic's re-release carries the familiar colour-coded packaging design

>where are they now?

Mastertronic agreed publishing deals with many programmers, yet records show that some of them never returned to collect their royalties! Those who vanished without trace include Nigel Johnstone (The Captive, Spooks), M&S Srebalius (Rockman, Rest in Peace), Paul Ranson (converted Bump Set Spike to Amstrad and Spectrum) and Raymond Tredoux (Star Force Nova). One cheeky chap who probably had good reason not to return with cap in hand was Sean DeBray, who sold the same game as Ghettoblaster to Virgin, and as Streetbeat to Mastertronic!





The same game, but with a different title and a different publisher

directors. They never employed programmers directly. Everything was bought in from outside, either directly from the authors or from other games publishers. Once established, Mastertronic was deluged with games from enthusiastic amateurs and actually published quite a few of them.

Before the company started trading, the business strategy had been clearly defined. Each of the separate elements (distribution, sourcing and pricing) were vital to success.

The founders fell back on their backgrounds in video retail and used their contacts to set up distribution deals. In the beginning, the high street chains were not interested. But because the games were cheap, it was easy to persuade smaller retailers to take them. Mastertronic set up a network of self-employed distributors, with some knowledge of merchandising, to reach outlets that the mainstream wholesalers overlooked. A key figure in setting up these networks was Richard Bielby, an ex-professional cricketer with Leicestershire. Bielby and his wife kept in touch with dozens of shops and traders, bought in bulk from Mastertronic and broke the stock into manageable units for their sub-distributors and merchandisers. Many had experience of the video distribution business, which was now rapidly consolidating as large high street operators took over. Computer games software was a welcome alternative.

They targeted newsagents, sweetshops, garages, video shops, groceries and even motorway service stations. Shops were encouraged to take 'dealer packs' – 100 games at a time mounted on cardboard racks. They were asked only to give the products some floor space. Sale or exchange agreements meant they undertook no risk.

Rallying the retailers

The nervousness of the retail trade about the continuity of software products was profound. Buyers did not want to rely on publishers who might not deliver new product on time. They wanted the same sort of assurances that the long established music and book publishers could supply, with guaranteed releases of new titles and buyback arrangements for overstocks. Mastertronic set out to provide these assurances. While other publishers based their marketing strategy on the output of one or two key programmers,



From left to right, Martin Alper, John Maxwell, PR person Alison Beasley and Alan Sharam

Mastertronic cast its net wide and looked to release a constant flow of new titles.

Unlike its competitors, Mastertronic did not entrust the storage and distribution of its products to wholesalers. Determined to control the distribution process, the directors set up their own warehouse. In the early days this was a cellar in Paul Street, on the edge of the City of London. Most of the employees were casual labourers. To take on the overheads of a warehouse was a bold step, and one which very few publishers would ever do. But for Mastertronic, the key was to keep promises about delivery. No publisher working through a wholesaler could guarantee when products would be issued. A retailer buying from Mastertronic could, if they wished, go to the warehouse and collect the goods there and then.

Running the warehouse kept the directors in touch with the physical side of the business too. By listening to retailers, they were forced to understand how to pack games, what sorts of packaging broke in transit, what sort of labelling was required, and just about every aspect of distribution. Furthermore, the three key suppliers – the tape copier, the arthouse and the printers – were all geared to fast responses. They understood that it was often crucial to get a certain number of titles out each month.

Mastertronic also pioneered colour coded packaging. All games had a coloured triangle on the top right hand corner of the inlay and a coloured rectangle on the spine. Spectrum games were yellow, Commodore 64 games were red and Amstrad games were orange. This led many software houses to use variations on this theme. Retailers, who understood very little about computer games, liked this system and it enhanced the professional image of the company.

>One man and His Droid II

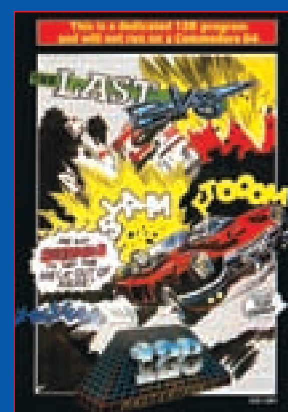
Lurking just outside the top 10 best selling Mastertronic games is One Man & His Droid, the world's first alien sheep-herding simulator. Clive Brooker, its programmer, wrote a 128K-only sequel in 1991 and approached Virgin Mastertronic. The company told him that the Spectrum market was all but dead, but if the game was good enough, they'd convert it to other formats. In the end the game was never published, but Clive has made it freely available for download from his site (www.autolaunch.freeserve.co.uk).

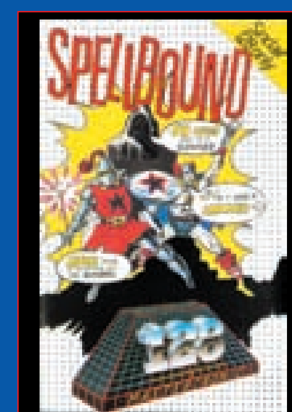


The unpublished sequel, now available as a free download

>Formats of the future!

Mastertronic was one of the few publishers to sell dedicated software for the more powerful Spectrum and Commodore 128 machines. The Enhanced versions of The Last V8 and Kikstart on the C128, only sold around 5,000 copies – very poor compared to the standard machines. It was a similar story on the Spectrum where the 128K versions of the Magic Knight sequels suffered badly against their 48K counterparts. In fact, the 128K version of Knight Tyme was released a couple of months before the 48K version, yet still only shifted 7,400 copies.





Poor sales forced Mastertronic to can its dedicated 128K games

Sourcing software

Because Mastertronic was a publisher and not a software house, its first problem was to source the product. One important source was Mr Chip (later Magnetic Fields), a software house run by Doug Braisby. The games he sourced in the first 15 months of Mastertronic's life (up to June 1985) sold a staggering 395,000 copies. But this achievement was eclipsed by another key source, the Darling Brothers. Having mastered the art of quickly developing games for the Vic20 and C64, David and Richard Darling set up a partnership with Mastertronic which gave them both a royalty payment and a share of the profits on the sales of their games. It was astonishingly successful. In that first 15 months, nearly 750,000 games written by the Darlings were sold, netting them some £85,000! For two boys of school age, this was evidence enough that games would earn them more than any nine to five, and they soon terminated the deal with Mastertronic and established Codemasters, their own budget software company.

To put these two sources in perspective, about 2.1 million units were sold of all titles in that first 15 months. Thus the deals with Braisby and the Darlings secured 55% of early Mastertronic sales. Later on, as Mastertronic became better known, many people approached the company with finished games, or just ideas, and were keen for Mastertronic to publish their work.

Early hits

The early games were produced for the dominant computer formats of the time. The Vic20, C64 and Spectrum were the main machines. The marketing strategy required a flow of titles so that retailers had compelling reasons to keep the games prominent in their shops, and attracted and held the interest of the consumer.

Between April and June 1984, Mastertronic launched 32 titles: 13 on the C64, nine on the Spectrum, seven on the Vic20, two on the BBC Micro and one on the Dragon. Eight titles were developed by Mr Chip, seven by the Darlings and four by CME Software. Almost all were derivative, based on popular arcade games. Hence there was a Centipede clone called Spectipede on the Spectrum and BBC Micro, and a Pac-Man rip-off named Munch Mania on the C64. But a couple of titles stood out – the Darlings' BMX Racers on the C64, and Vegas Jackpot by Mr Chip on the C64 and Vic20. BMX Racers was not based on an arcade game and it was the first of a number of extremely successful games aimed specifically at young boys. 340,000 copies of BMX Racers were sold. Vegas Jackpot sold nearly 300,000 units, including a rare version for the Dragon.

Great care was paid to the appearance of the games and to the image of the publisher. Quality artwork was commissioned for the inlay covers. Some of these pictures, particularly those with science fiction themes, undoubtedly helped many an undistinguished game to sell.

Pricing

In 1983/4, most computer games retailed in the UK at prices between £5 and £8. Retailers disliked cheaper games because they made less profit and the public were suspicious of the quality of budget games (rightly so in the majority of cases). Despite this, Mastertronic games were priced at a mere £1.99.

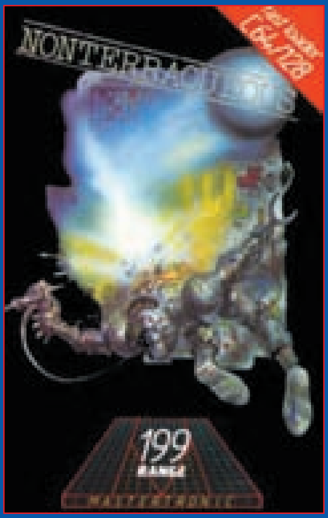
At the time, all computer games in the UK and Europe were distributed on cassette tape. Computers using floppy disks were available, most notably the C64 and the models aimed at business users, such as the Apple, Commodore PET and Tandy ranges. But these were mainly sold in the US. In Europe, the cheaper tape-based machines were much more common. Games were short, reflecting the limited memory capacities of the computers. Code that filled the memory would fit onto a short length of tape that could load in around four or five minutes. For a reasonable print run, a tape duplicator could produce copies for about 25p each. Mastertronic, aiming for large product runs, bought its tapes at 22p (some assistance was gained in the directors having part ownership of the tape duplicator). Inlay cards cost around 3p each, with the cover artwork costing anything up to £1,000; assuming a print run of 20,000, this worked out at around 5p per unit. Other distribution costs might add another 5p in total. So a game could be duplicated and put out to market for a total cost of 35p.

The other main cost was the software itself. Games could be purchased outright but most authors wanted royalties, so as not to lose out

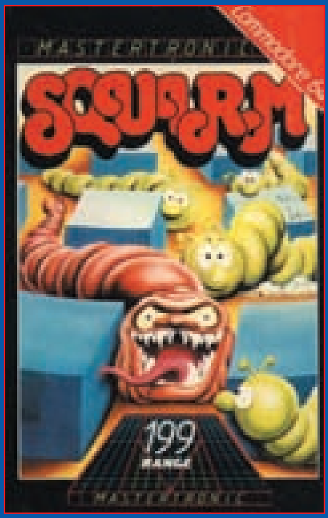
>Mastertronic's all-time best sellers.

The top 30 sales across all formats, including all Mastertronic labels.

>LOAD"BMX"
>LOAD"SWAT"
>LOAD"KANE"
>LOAD"VEGAS"
ERROR
>LOAD"FORMULA1



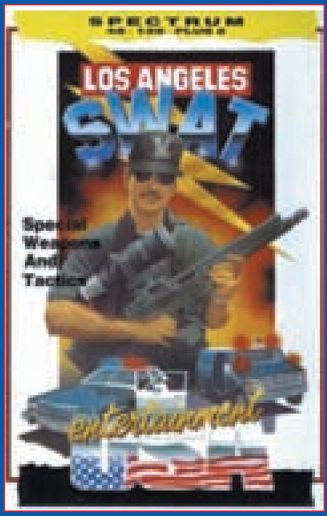
30 NONTERRAQUEOUS 121,533



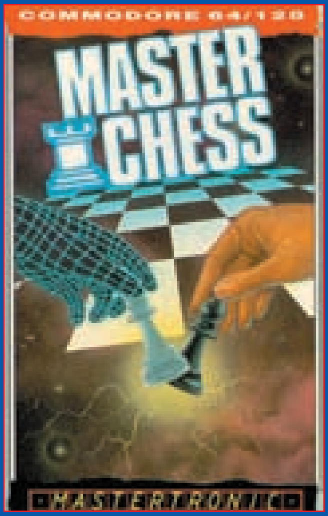
29 SQUIRM 123,006



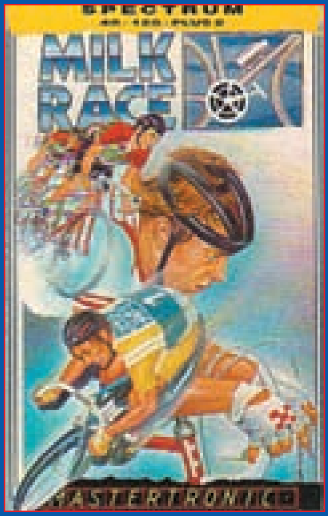
24 SPELLBOUND 152,378



23 LA SWAT 161,672



22 MASTERCHESS 167,601



21 MILK RACE 174,110

in case of success. The standard deal that was offered in 1984 was an advance of £2,000 and a royalty rate of 10p per unit. Many young authors were very happy to take this, especially when Mastertronic usually went on to sell 50,000 copies or more.

Profitability

Having set the costs, the profit depended on the wholesale price. Here, the calculations work backwards. From a retail price of £1.99, VAT (15% at the time) took 26p. Retailers expected to make a margin of 30%. They would, therefore, not buy at prices higher than about £1.30. Between this price and the production cost of 35p was a margin wide enough to cover advertising, overheads, the profits of distributors and, provided there were not too many, the costs of failed titles.

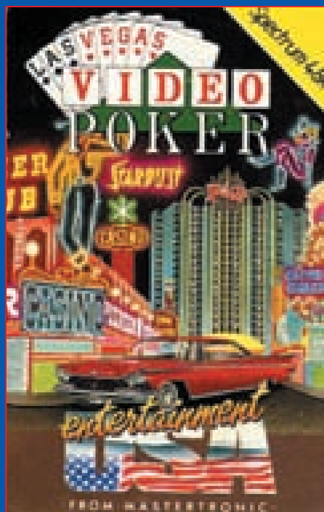
In practice Mastertronic sold to distributors at about 90p per unit, reduced to around 80p in the more competitive late 1980s, and at about £1.30 when they were able to distribute directly to retailers. This pricing structure would generate good profits provided sales were high enough. If the total sales of a title were just 10,000 units, then raw material and distribution costs might be £3,000, inlay artwork and advance to the author a further £2,500, and the receipts about £9,000. So this would bring a reasonable gross margin of 38%. But in the early days, the company easily exceeded 10,000 units per title. The ten C64 titles released in Mastertronic's early days sold (on average) 40,000 in the first year, then over 50,000 before being withdrawn from sale. The Vic20 titles achieved 44,000 on average. Surprisingly, the early Spectrum releases did less well, but still averaged 28,000. Budget pricing proved to be perfectly viable provided that the majority of titles achieved good sales, and in the fast growing market of the mid 80s, at the pocket-money price of £1.99, they did just that.

Growing pains

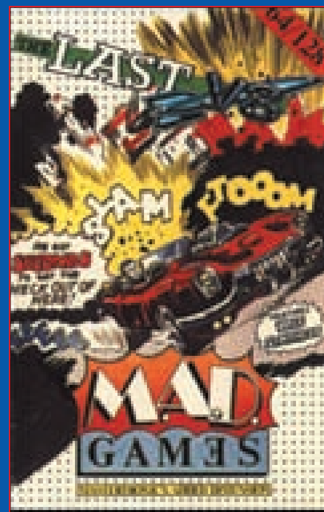
Rapid growth required more staff and the development of internal systems for accounting, sales, stock control and royalties. The company left George Street for a flat overlooking Regent's Park. By now there was a games buyer, John Maxwell (with two assistants) and some PR, accounting and secretarial staff.

The flat soon proved too small for the expanding business, so in September 1985, Mastertronic found new offices in Paul Street (where the warehouse was situated). This became the company's home until it merged with Virgin Games in September 1988.

But long before then, the emergence of new computers slowly began to complicate the business. The company now had to consider whether it was worth making conversions of existing hits for different machines and models. The more types of computer, the less shelf space available for each individual format. In a way, this reduced the range of different games. The Amstrad CPC, Atari XL, MSX and Commodore 16 computers all became established in this year. Few of the competitors took much notice of the C16, and for a while, Mastertronic was the only company with a range of games for this machine. Each title sold in huge quantities. For example, Squirm on the C64 sold 41,000 copies, but one year later, the C16 version sold 82,000.



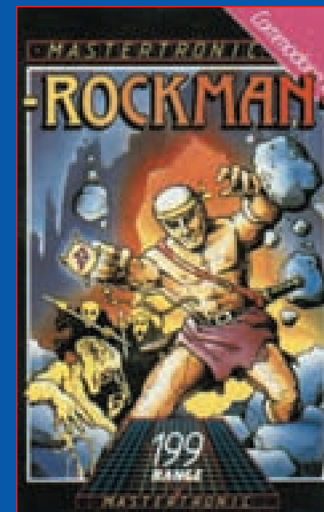
28 VIDEO POKER 127,174



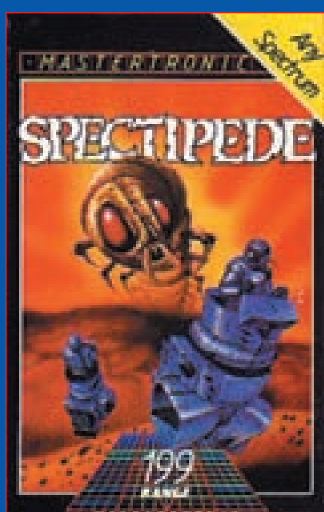
27 THE LAST V8 127,331



26 BIG MAC 139,946



25 ROCKMAN 143,882



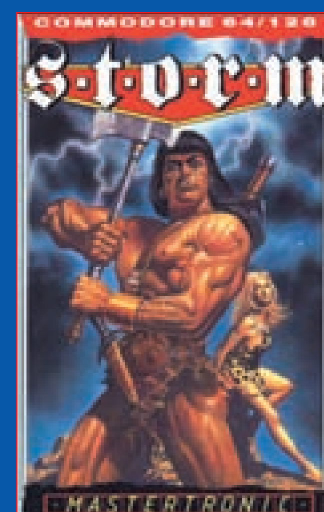
20 SPECTIPEDE 178,115



19 WAY OF THE EXPLODING FIST 182,407



18 FEUD 191,381



17 STORM 193,074

MAD for it

In late 1985, the company launched the MAD label. This stood for Mastertronic Added Dimension, and was the first, deliberate, step away from the pure budget market. MAD games retailed at £2.99 and were intended to be of better quality than their cheaper counterparts. The label was launched with a boat party on the Thames, where the authors demonstrated the first games in the range – The Last V8, Master Of Magic, Hero Of The Golden Talisman and Spellbound, sequel to the very popular Finders Keepers. The MAD launch was an exception to the company's policy of not spending a lot on marketing. Its competitors spent plenty on advertising, mainly in magazines. Mastertronic rarely advertised. This probably reduced the amount of editorial coverage it received, but overall the game reviews were fair. The press had been fairly contemptuous of the publisher at first, but in 1985 there was a grudging acceptance that budget games were at least value for money, with some as good as full price products.

In 1986 Mastertronic became cool. It began to be deluged with games, game ideas and propositions. Sample tapes arrived daily and were stacked up for evaluation. People would walk in off the street and if they had something promising, they'd be signed up there and then. The TV show Jim'll Fix It received a letter from a youngster, asking if his idea could to be turned into a game, and Uncle Jim duly obliged (with a little help from Mastertronic and Icon Design). The game was called Supertrolley and featured a cartoon Jimmy Saville on the cover.

Programmers visited the company regularly, including David Jones (Magic Knight series), Clive Brooker (Empire Fights Back, One Man & His Droid, Lap of the Gods), Kevin Green (Skyjet, Flash Gordon, Space Hunter), Jim Ferrari (King Tut, Human Race, Hollywood or Bust). Now and then Rob Hubbard would pop in and hand over his latest tune. Jeff Minter, the shaggy-haired one himself, also visited. Several programmers worked for the company for a while as technical advisors. These included Stephen Curtis (Nonterraqueous, Soul of a Robot, Into Oblivion), Richard Aplin (Destructo, Fly Spy, Ultimate Combat Mission) and Tony Takoushi (Frenesis, Hyperforce).

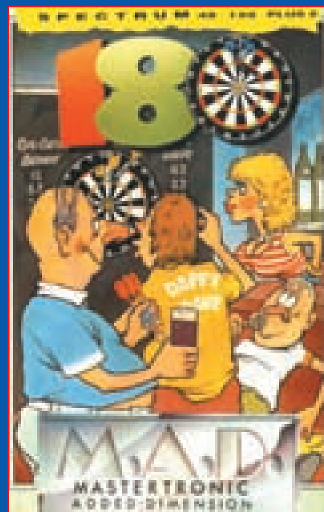
Tomorrow the world!

From the beginning, Mastertronic software had been sold in the USA by a local distributor. In 1986, Alper went to California to set up Mastertronic Inc. Primarily, this company could only distribute C64 games because all the other 8-bit computers were virtually unknown in the US. Gradually, Alper introduced games for the new 16-bit machines and Mastertronic Inc began to take on a different profile to the UK-based business. Links with US software houses provided a new source of games and the label Entertainment USA was created to showcase these in Europe. This was balanced by another label named Bulldog ('Best of British').

The growing business also found exclusive distributors in the major European markets and thus created the impression of a truly international group. The UK company was now managed by Herman, whilst Sharam increasingly specialised in sales and logistics. Around the late summer of 1986, Mastertronic



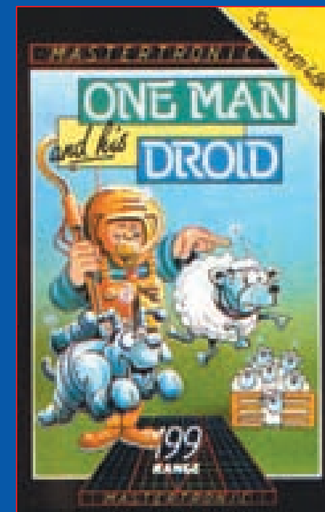
16 NINJA 194,897



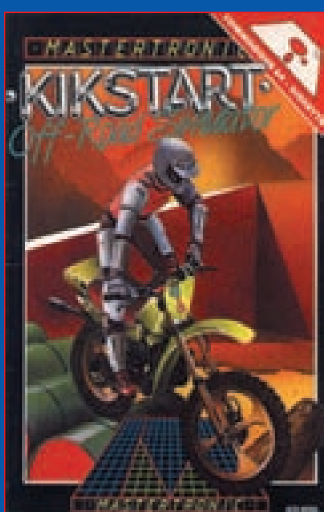
15 180 196,155



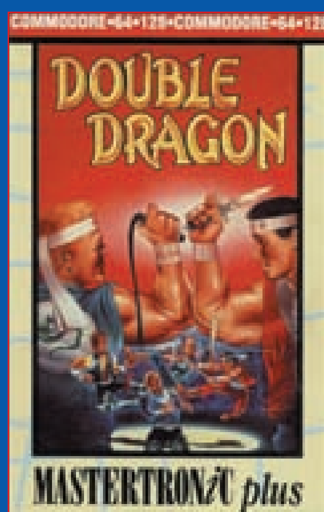
14 MOLECULE MAN 210,693



13 ONE MAN & HIS DROID 212,722



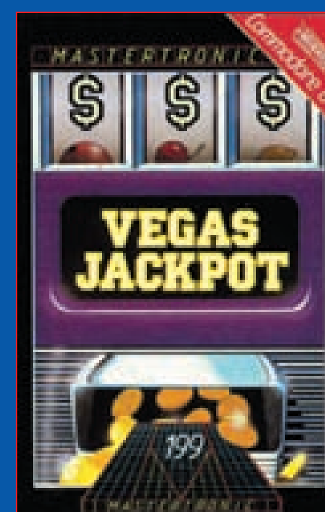
08 KIKSTART 286,256



07 DOUBLE DRAGON 289,510



06 SPEED KING 304,499



05 VEGAS JACKPOT 306,957

recruited Geoff Heath as Director of Marketing. Geoff had run both Activision and latterly Melbourne House. He was something of a heavyweight in the games industry, and his long-term target was to publish full price software under the Mastertronic name.

16-bit computers became increasingly popular, and for the first time, the quality of games for home machines such as the Amiga and the Atari ST seemed similar to those found in arcades. The 16-bit range was launched, appropriately enough, on a new label called 16-Blitz, although the name was not used for very long. Mastertronic Inc began to develop a range of new arcade games that would run equally well on home computers. It agreed to buy a large number of Amiga chips from Commodore to power the new arcade machines. This venture, called Arcadia, nearly killed the company because the project developed slowly, with games of poor quality not well suited for arcades.

On the other side of the coin, the success of the budget range and the growing influence of the company led to it becoming the main supplier of both budget and full price software to a number of major retailers in the UK, notably Toys R' Us and Woolworths. Some full price publishers were happy to let Mastertronic re-release their older games at a budget price, and of course, this was very easy business. The Richochet label was born, featuring games from Activision, Martech and US Gold.

Mergers and buy-outs

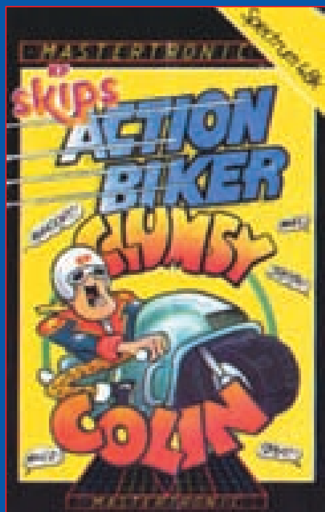
The business had always steered clear of full price software, but that changed radically in 1987 when it purchased struggling UK publisher Melbourne House from its Australian holding company, Beam Software. Melbourne House kept its label identity and a few of the staff joined the Mastertronic team, notably Rachel Davies the marketing manager, and general manager Martin Corrall. Ironically they were reunited with their old boss, Geoff Heath.

This move meant that Mastertronic had first refusal on re-releases of classic games such as the Hobbit, Lord of the Rings and Way Of The Exploding Fist. However, the main justification for the purchase was to provide a vehicle for the sale of full price games, and in particular as a sales outlet for the home versions of popular arcade games.

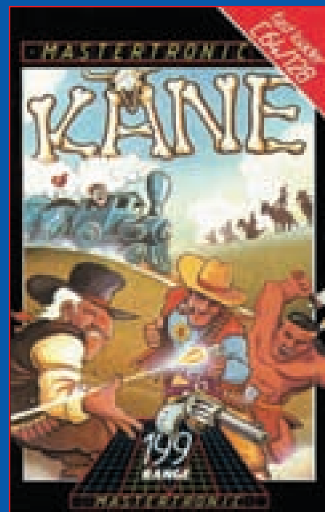
In 1987, following negotiations between Herman and Richard Branson, Virgin Group purchased the 45% of shares held by the outside investment group. In that year, Mastertronic's turnover was about £8 million, with pre-tax profits standing at £1 million. The deal valued the group at around £10 million. The remaining 55% was held by Alper, Herman and Sharam, who eventually sold out in 1988. The company was renamed the Mastertronic Group Ltd, and later merged with Virgin Games to create Virgin Mastertronic.

In September 1988, the staff left Paul Street and joined forces with the Virgin Games staff in offices just off Portobello Road. This signalled the beginning of the end to the key Mastertronic budget business.

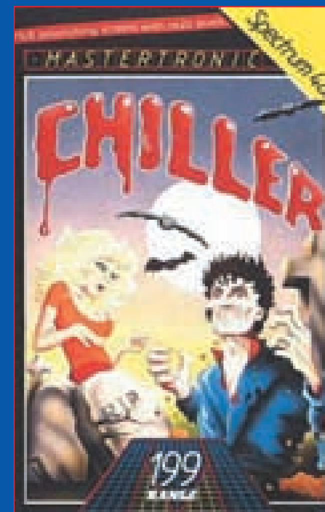
While the buy-out shifted the focus of the company, the budget end of the business had been in general decline since 1986, the year in which Mastertronic peaked. From then on, sales declined almost as fast as they



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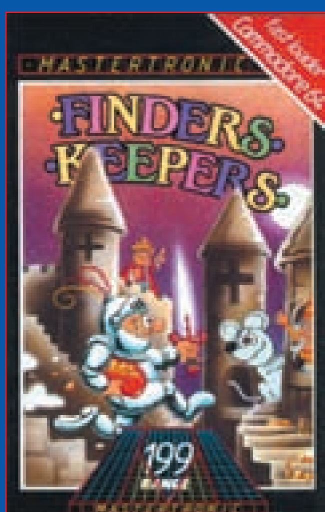
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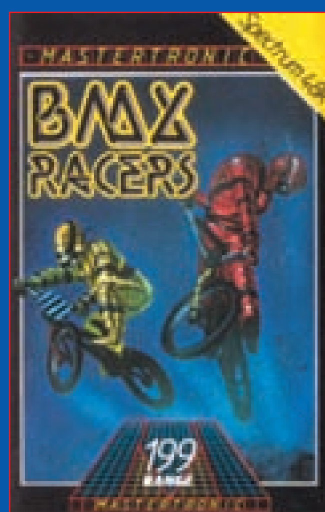
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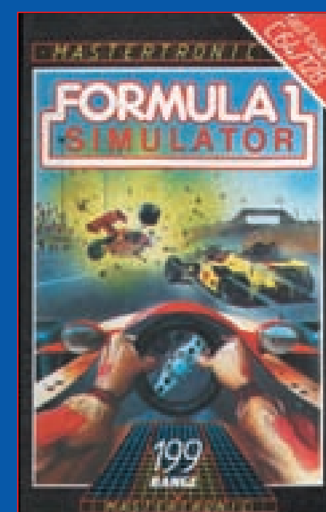
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03 BMX RACERS 345,423



02 GHOSTBUSTERS 412,922



01 FORMULA 1 SIMULATOR 568,013

grew. The number of titles released actually increased in 1987/8, so the unit sales per title were falling rapidly, eroding the profitability of the business to the point that there seemed little use in continuing.

This decline had several reasons, the first being new and intense competition in the budget market. Codemasters has established itself as a very successful company, and full price publishers like US Gold began to release their own budget labels. The growing market for 16-bit computers was another contributory factor. Mastertronic produced budget games for these machines but there was never the same buoyancy in the market. The console market was bouncing back too, spearheaded by the NES and the Sega Master System. This was one pie that Mastertronic most definitely had its finger in.

The Japanese giant

It was Herman who, in early 1987, spotted that Sega had no UK distributor for its Master System range. Mastertronic applied and was appointed distributor for one year. Martin Corrall, who was somewhat at a loose end after the absorption of Melbourne House, was the ideal manager for this new line of business. The company sold all it could get its hands on that year, and the UK distributorship was renewed. In addition, Mastertronic were appointed as distributors in France and Germany, and thus was born the huge business that was to become Sega Europe.

In 1991, the group turnover was almost £100 million. Nearly all of the sales, and certainly all of the profit, came from Sega products. Full price games such as Golden Axe and Supremacy were achieving significant sales, making the budget business irrelevant.

In early 1991, Sega expressed an interest in taking over the distribution business (but not the publishing side). Virgin Group sold, and as a result, the staff moved over to Sega. Only a handful of Virgin programmers stayed with the publishing side (quickly renamed Virgin Interactive Entertainment, or VIE).

After the Sega takeover, Herman became deputy Managing Director of Sega Europe and Sharam was appointed Managing Director of Sega UK. Alper stayed with Virgin and continued to head up VIE for several years. Around 1993, VIE pulled out of the budget games market altogether.

Looking back

The Mastertronic name may have died over 10 years ago, but it continues to bring back memories. There's surely thousands of kids who could not afford the more expensive games and who were able to enjoy gaming thanks to Mastertronic. The business really was unique – it could not be replicated today. Games are now developed by teams, with typical retail prices being between £30 and £40. Gone are the days when a teenager could walk unannounced into a publisher's office, load up their game and instantly be offered a publishing deal. But there really was a time when this happened. It is beginning to feel like a legendary era, but it was only twenty years ago.

For further insight into Mastertronic, visit Anthony's website at: **www.guter.org** RG*

>Street Fighting Clan.

It's 15 years since Street Fighter first arrived on home consoles. To celebrate this anniversary, Capcom is to release Hyper Street Fighter II, the ultimate version of its seasoned brawler. Our resident fight fan, Charles Brigden, likes the odd scrap now and then, especially if it involves Hurricane Kicks and Dragon Punches. Stand guard as he presents a timely history of this legendary series




<formats>

>The new generation.

After a long, long, long wait, Capcom finally released a true sequel to Street Fighter II in 1997. Street Fighter III: New Generation received a lukewarm reception from fans, being viewed as a step down from the excellent Street Fighter Alpha series. Capcom did away with every character except Ken and Ryu, and introduced a whole new cast of bizarre fighters who really left a lot to be desired. Improved versions called Second Impact and Third Strike followed, addressing the character issue by bringing back Akuma and Chun-Li.

The main problem with Street Fighter III was its sheer depth. This game was simply too complex to be enjoyed in the arcades. The Dreamcast version fared better, because you could take a copy home and devote the time required to master the game.

>Pocket fighters.

Unsurprisingly, Street Fighter has also had its fair share of outings on handheld consoles, the first of which appeared in the form of Champion Edition on the portable version of the PC Engine. Hot on its heels was a version of The World Warrior on the original GameBoy. Better versions have appeared on Nintendo's handheld successor, the GameBoy Advance, with the mouthful that is Super Street Fighter II Turbo Revival, and the single best portable version of the game, Street Fighter Alpha 3 Advance.



Over the history of video and computer games, there have always been ground-breaking titles that have defined – or redefined – a genre and become instantly synonymous with that particular category. So much so, that when you think of that type of game, you immediately recall that one specific title. With platformers you immediately think of Super Mario Brothers, and with driving, you think of Grand Theft Auto: Vice City. With 2D one-on-one beat-em-ups though, there's only one game that smacks you in the face – Street Fighter II.

First strike

The legacy of Street Fighter II and its legions of modifications, sequels and prequels began in 1987, with Japanese publisher Capcom, who had previously been responsible for such classic arcade titles as 1942 and Ghouls 'n' Ghosts. Street Fighter arrived, and while it was not the game we have come to love so much, it had all the signs of things to come. For instance, there were only two selectable characters, Ryu and Ken. The final boss of the game was Sagat, who would wear the scar given to him by Ryu at the end of this game in later entries in the series.

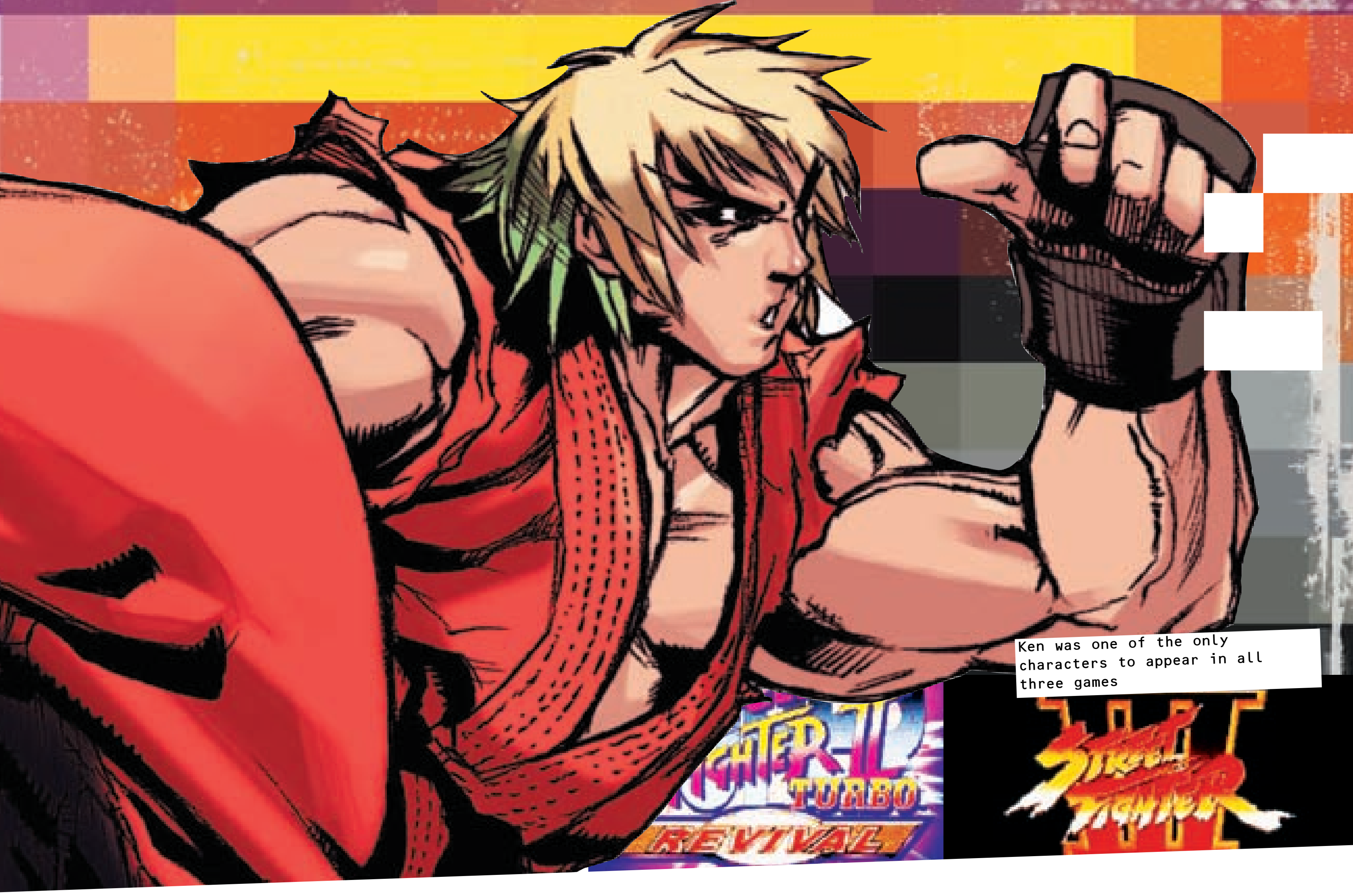
Capcom employed a new gimmicky fighting system, with strange pads on the machine that you would hit to punch or kick. The harder you hit the pads, the more damage you did to your opponent. These pads inevitably broke, forcing Capcom to replace them with two separate sets of buttons for light, medium and hard attacks. The six button fight system was born, and the rest was history. While not hugely popular, and still forgotten amongst the mainstream public that would later eat up its sequels, Street Fighter had sown the seeds for Capcom, and its advance on the beat-em-up market would soon be coming up full force.

In 1990, they released Final Fight, a side-scrolling beat-em-up that would advance the work in Street Fighter further, with better animation and smoother moves. The game was a huge hit, and while its simple storyline and fighting were no match for Capcom's later beat-em-up successes, its characters, both good and bad, would later go on to appear in Street Fighter sequels. After the popularity of Final Fight, the stage was set for Capcom to unleash its newest title on the world.

World beater

Street Fighter II: The World Warrior was released into arcades in 1991 and immediately became a smash hit. Word spread through schools and playgrounds with the news of this incredible game. With eight fighters to choose from, hailing from all around the world, and the reinstated six-button control system, The World Warrior effectively created a new genre in which combos could be pulled off with ease, and amazing special moves could be achieved by a simple combination of buttons. However, while everybody ate it up, we all wanted more.

In return, Capcom decided to give it to us, over and over, and over again. After the release of the original Street Fighter II, there were more than five different updates to the game, with dozens more added to the series. Naturally, this was seen as overkill by



Ken was one of the only characters to appear in all three games

even the most ardent fan, and the later releases in the series were not met with a huge amount of commercial success or fanfare.

With Marvel vs Capcom 2, the last Street Fighter release in recent times, Capcom seems to have gone onto pastures new, with series' such as Resident Evil and Mega Man selling millions. So is this the end for Street Fighter? You'd think so, but Capcom aren't about to let it slip from memory just yet. But just what is it that has made Street Fighter II still a household name 12 years after its release, and that made the title a genre-defining game in the first place?

Birth of a legend

Video gaming wasn't particularly exciting at the beginning of the 1990s. We still had Mario and the usual Nintendo, sugar-coated suspects, and Sonic was about the most exciting thing around, but there was nothing out there that was ready to grab us by the throats and make us take notice. At least, not until Capcom unleashed Street Fighter II in 1991. Here was a game that was so deceptively simple that anyone could just pick it up and play, and also enjoy it. Each character has an abundance of special moves, and they could be learned in a very short time. The use of combo moves was actually an accident on the developer's part. They discovered there was a split-second gap between most of the moves – just enough time to sneak in another attack. This introduced an element of skill, elevating it above the button-bashing tactics required by just about every other fighting game at the time. While everyone else was putting out games that still had the basic structure of Double Dragon, Capcom was taking the genre by the scruff of its neck and shaking it up for all to see.

Street Fighter II also made a reasonable breakthrough in the treatment of its characters. At the time, most story-based beat-em-ups were the typical revenge dramas that basically set them up as game adaptations of Death Wish. SFII still had this angle, but split itself across eight different characters that, while being stereotypical, all had refreshingly different stories. Ryu was the essential warrior, searching not for glory or prizes but to satisfy his spirit, while Ken was the arrogant and egotistical one out to show everyone that he was the best. Dhalsim fought to transcend his spiritual plane, and Blanka fought because he didn't know any different, bless him. There were two characters, Guile and Chun Li, who did embrace the revenge motive, but neither of their scenarios were as straightforward or cheesy as something like a kidnapped girlfriend.

But where the game really made headway was the gameplay. Never before had a fighting game really had such an impact to a point where it was imperative for everybody to know every single move for every single character. Sure, people picked their favourite characters and ran with them, but it was still important to know moves for everyone, so if someone got to Ken or Ryu first you could easily play with Zangief or Guile. That was the whole dynamic of Street Fighter II. And it was all inherently linked to the incredible two-player mode.

The one-player mode of Street Fighter II was always excellent and it was one of



those games where one man against the machine always drew a crowd of people. But what was great in one-player was expanded exponentially in two-player, with the satisfaction of beating the machine itself not half as much as defeating the man standing next to you, destroying his pride and scarring his soul. Whether it was your best friend or some random kid you met in the arcade, nothing mattered except sending that person home licking their wounds and hanging their head in the wake of your bare-knuckle skills.

Attack of the clones

Never one to overlook a potential franchise, Capcom released a new version of Street Fighter II in 1992. Champion Edition wasn't that different to the original game, with Capcom keeping the tried-and-trusted formula but making some small alterations. On the visual side, each character had some brand new threads, but everyone also had their moves beefed up. Ken's Dragon Punch had a further range, Ryu's fireball was more powerful, and every character was stronger. However, the biggest addition was the chance to finally play as one of the four bosses, Balrog, Vega, Sagat, and the big baddie M. Bison. While the ending sequence for each boss was essentially the same – with the evil hordes taking over the world – the attraction of being able to finally use moves like the Tiger Uppercut and Bison's all-powerful Psycho Crusher was a big draw, and unsurprisingly, Champion Edition was a big hit.

The success of Champion Edition brought on a whole host of illegal pirate versions of the game, with faster speeds and some outrageous moves. Now every man and his fish could walk into a seedy arcade, funfair, or takeaway and experience a more intense, if illegal, Street Fighter experience. Now Ryu could shoot a volley of fireballs that covered the whole screen, any character could teleport, and you could switch between characters mid-game. The games had titles like Rainbow Edition and Blackbelt Edition, and while they looked cool, the lack of any kind of rules to these special moves rendered them unplayable.

As a result, Capcom went back to the drawing board, and beat the pirates at their own game by releasing Street Fighter II: Hyper Fighting. This version had similarly radical moves, but was much more stable. The main attraction of Hyper Fighting was its increased speed, but Capcom again gave all the characters new outfits and another increased level of power and strength. Now Ken was able to fly across the screen with his Dragon Punch, and he and Ryu could reach higher with their Hurricane Kicks. Blanka received a new cannonball attack and Dhalsim was blessed with the best move of all – the ability to teleport. Hyper Fighting was, expectedly, a huge success, but this wasn't the end for the series just yet. Capcom was only just getting started.



The new Hyper Street Fighter II game includes every fighter from the long-running series

In 1994, Capcom performed a total overhaul of Street Fighter II. They refined the look of the characters, gave the game much-improved graphics, and added four brand-new characters – Fei Long, DeeJay, Cammy, and T.Hawk. This took the total number of playable characters to 16. Super Street Fighter II: The New Challengers was another huge hit, as was the special Tournament Edition in the arcades. Basically, this included four machines that were connected up, and as soon as you won a fight, you were told which machine you had to go to next in order to continue the tournament. It was a bit strange, and a bit like musical chairs, but it foreshadowed the tournament modes now seen in every one-on-one fighting game available. Just as before, Capcom would later refine the proceedings again and update with Super Street Fighter II Turbo and Turbo X, but while the game was well-liked, the popularity of the series was beginning to wane.

Homeward bound

The series may have been suffering in the arcades, but it was thriving at home. Street Fighter II appeared on just about every viable platform, including a pretty horrible monochrome version on the humble Spectrum! The Amiga, Atari ST and PC versions were better, but they suffered from long loading times between fights.

No such loading problems plagued the excellent SNES version though. Even at a hefty £64.99, it was a massive hit. Naturally, SNES owners spent most of the time that they weren't playing it taunting the Street Fighter-less Megadrive fans, although this was short lived as Capcom announced it was releasing Champion Edition on Sega's console. But Sega fans didn't have the upper hand for long, as Hyper Fighting was quickly announced for the SNES. In the end though, both consoles essentially got the same game, with the SNES having a brilliant conversion of Street Fighter II Turbo, while the Megadrive got Street Fighter II – Special Champion Edition, which was just Turbo with a different name. The last sign of the game on a home console was at the end of the SNES era, when Capcom and Virgin released Super Street Fighter II. It was only released in limited quantities, and while a good conversion, signalled the end of Street Fighter II. Well, for the time being...

Fighting fit

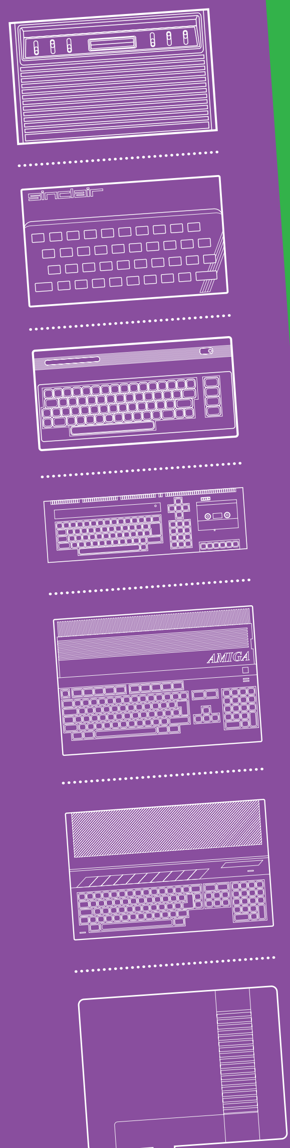
In the latter half of the decade, Capcom released a whole host of Street Fighter games, the best of which were Street Fighter EX + Alpha and Street Fighter Alpha 3. Sadly, the series never regained the popularity it had in the early 90s. However, if you're an SF fan and in need of a new fix, you'll no doubt be happy with the latest news coming out of Capcom HQ. With 2003 being the 15th anniversary of the series, the publisher has seen fit to issue a new version of the game. Hyper Street Fighter II: The Anniversary Edition will yet again have a graphical overhaul and will feature every single character from every edition of Street Fighter II. This means you'll be able to pit Ryu from Champion Edition against Ryu from Super Turbo X, and all kind of combinations. It'll also be released in a special box-set complete with a DVD of the fantastic animated movie and a whole host of other goodies.

Rest assured it'll probably be lapped up by an army of fans in no time. But, aside form nostalgia, just what is the future of the Street Fighter series? Any chance of a new SF game will no doubt depend on the success of The Anniversary Edition. Will Capcom take the leap and do a new title in the style of the mighty Soul Calibur II? Will they stick to 2D? Will anyone but the most ardent Street Fighter fan buy it? Whatever happens, Capcom can be safe in the knowledge that few games have been more influential in the games industry than Street Fighter. Sho-ryu-ken! RG*





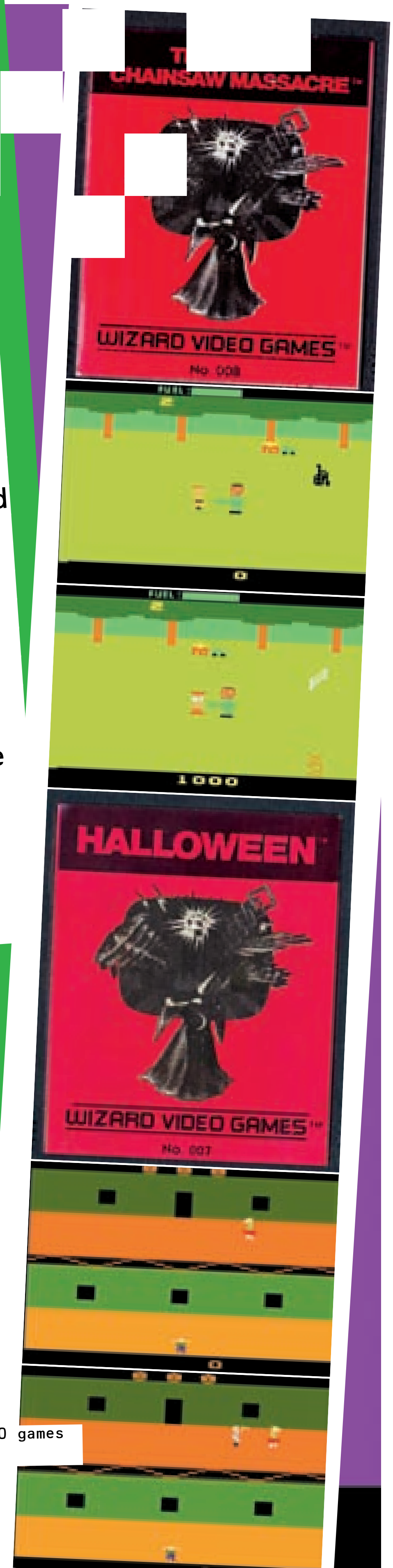
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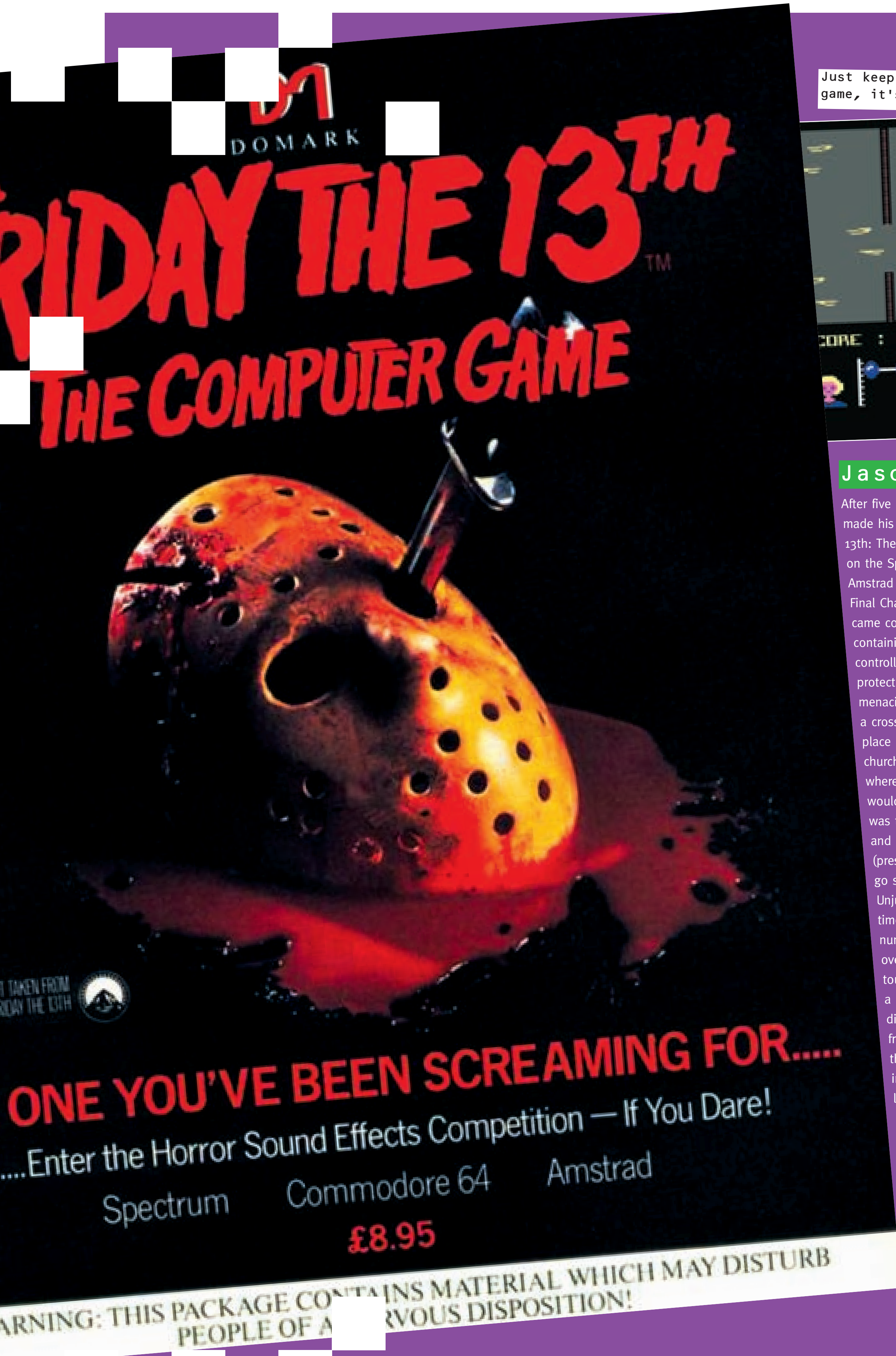
>Licence to Kill

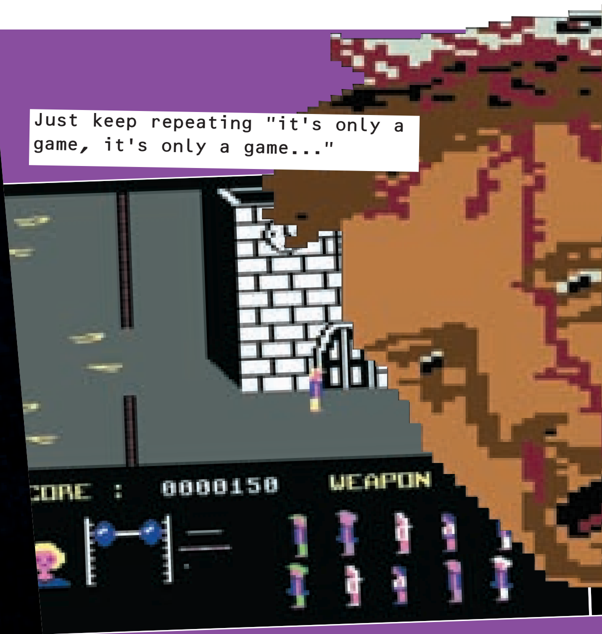
Horror is hot once again, with recent movies like Freddy vs Jason, Jeepers Creepers 2 and The Texas Chainsaw Massacre surpassing all expectations at the box office. In time-honoured tradition, hit films lead to licensed games and, indeed, Vivendi Interactive is to release a game based upon the upcoming movie Van Helsing movie. Martyn Carroll casts a Marty Feldman-style eye over the history of horror licences, beginning with games that played the death march when your three lives had expired

The original Texas Chainsaw Massacre movie spawned several sequels, last year's hit remake, and, in 1982, a game for the humble Atari 2600. Cited as "The First Violent Video Game!", it invited you to "play the part of the vengeful Leatherface or an innocent victim looking for safety". Considering the emotive advertising, it was no surprise to learn that distributor Wizard Games was headed by low budget-movie producer Charles Band. This title was followed by Halloween ("The game where HE comes home!"), in which you helped babysitter Laurie save kids from the hands of her brother Michael. While these games sound intriguing, the graphics were extremely basic and the sound was awful, even by 2600 standards. It was kind of hard to be scared of a beeping chainsaw or a shapeless 'shape'!



TCM and Halloween are two of the rarest 2600 games because many shops refused to stock them!





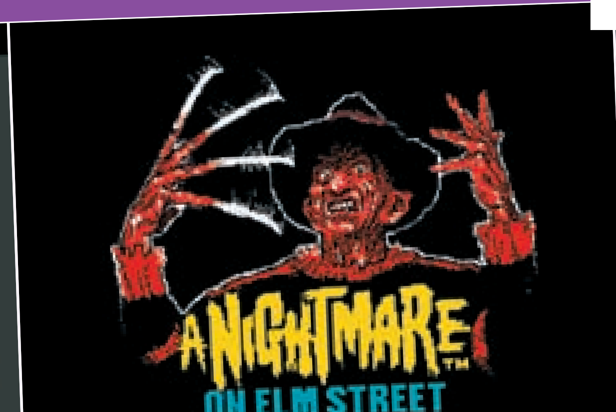
Just keep repeating "it's only a game, it's only a game..."

Jason lives

After five film outings, Jason Voorhees finally made his digital debut in Domark's Friday the 13th: The Computer Game. Released in 1985 on the Spectrum, Commodore 64 and Amstrad CPC, the game featured the striking Final Chapter artwork on the packaging and came complete with free 'blood' capsules containing red sugar water. In the game, you controlled the female lead as she tried to protect her 10 fellow campers from the menacing Jason. Your first job was to take a cross from the nearby graveyard and place it in the barn, the library or the church. This then became the sanctuary where the campers could shelter as Jason would not dare enter. The only problem was that the campers soon became bored and wondered out into the open (presumably to have sex, smoke dope or go skinny dipping by moonlight). Unjustifiably trashed by critics at the time of release, the game featured a number of redeeming qualities which overshadow its crude visuals. One nice touch was that you could also become a killer by locating one of Jason's discarded weapons and attacking your friends. Another excellent feature was the thud of your heartbeat which increased rapidly when Jason was lurking nearby.

Better still was the Friday the 13th game that appeared on the NES in 1988, courtesy of LJN. Taking control of one of six playable characters, your aim was to destroy Jason while protecting the kids in the camp (which, rather strangely, was also home to a hoard of zombies). As you searched the





One, two, Freddy's coming for you! The Dream Master invades consoles and computers



local area for useful weapons, an alarm would signal that Jason was stalking one of the cabins. You then had only 60 seconds to stop Jason before the bodycount started to rise. As in the films, defeating Jason was downright difficult and on some occasions, you even had his mad mother to contend with! The game was certainly challenging, but also a lot of fun and probably preferable to sitting through one of the Friday the 13th movie sequels.

Here's Freddy!

Predictably enough, LJN released A Nightmare on Elm Street on the NES the following year. While the game was standard platform fare in which you had to find Freddy's bones and burn them in the boiler-room furnace to banish him, the development diary was slightly more interesting. Apparently, the player originally controlled Freddy but the idea of having a comedic child killer as a playable character did not sit well with Nintendo. LJN were forced to switch things around at the last minute, although screenshots of the original concept appeared in the gaming press, suggesting that a prototype of the game may once have existed.

At around the same time, Monarch Software released an Elm Street game on the C64 (and later ported it to the PC). Unlike the LJN game, this version was far more episodic and followed the plot of the third film quite closely (it was subtitled Dream Warriors in fact). You began by selecting one of the five character from the film to play, all of which had their own specific 'dream power'. You then had to rescue the others from Freddy's house which, once inside, turned out to be a series of complex mazes containing monsters and traps. The action was viewed from a top-down perspective but 'action' is probably the wrong word as much of your time was spent solving increasingly perplexing puzzles. Only the most determined and deft gamers would make it through to the final battle with Freddy.

Universal appeal

Due to the graphical limitations of the 8-bit computers, the better horror conversions came along in the form of text adventures. Although the standard 'get key, go north' approach was often associated with bespectacled young males and blokes with beards, many of these adventures were extremely literate and featured fiendish puzzles. Software house CRL excelled in their quartet of horror film tie-ins for the Spectrum, C64 and Amstrad CPC, yet they insisted on submitting each game to the BBFC. As the guidelines state that all video games are exempt from classification unless they depict "gross violence towards humans or animals to any significant extent", CRL's actions were viewed purely as a bid to attain some free publicity.

While featuring no explicit text, their first release, Dracula (1986), included a small number of gory screenshots which were intended to offend the BBFC and therefore warrant an 18 rating. However, our beloved censors were obviously made of stronger stuff and only a 15 rating was issued. Programmed by acclaimed adventure author Rod Pike, the game itself was an atmospheric mix of gothic descriptions and fiendish puzzles. Taking on the role of Jonathan Harker, you began the game in a Transylvanian inn the night before your trip to deliver the deeds of Carrfax Hall to the Count's castle. After signing the register and obtaining your room key, you were provided with a seat at the dinner table. An interesting problem here was that the food you chose from the menu would have a direct effect on your dreams when you retired later in the evening. A dodgy combination often resulted in a gory death as your nightmares became reality, especially if you failed to light your bedside lamp and close the bedroom window before you slept.



Naturally, CRL followed Dracula a year later with Frankenstein, another excellent text adventure that proved to be similar in style and content to its predecessor. You began the game as Victor Frankenstein and your mission was to locate the monster that you created four years previously. When you eventually tracked him down, you were provided with the dubious pleasure of controlling the creature's actions yourself. Using the original novel for references, Rod Pike attempted to emphasise the monster's inherent humanity by trying to make the player sympathise with its plight: "There are no bolts though his neck", he explained, "I wanted to get the atmosphere and pathos of Mary Shelly's novel rather that the gore of the Hammer films". As a result, the small number of detailed illustrations still only received a 15 rating.

Undeterred, CRL finally succeeded with their version of Jack the Ripper (1988), the first game ever to receive an 18 certificate. Playing the part of a Victorian gent, the game began when you accidentally bumped into the Ripper as he fled from a Whitechapel crime scene. As you investigated his handiwork, the police arrived and accused you of the murder. Naturally, you were coerced into proving your innocence by trailing and exposing the man (or indeed men) involved.

Through its vivid use of prose and the subtle accuracy of the murder descriptions, the game succeeded in recreating both the atmosphere of Victorian London and the horror generated by the killer's unmotivated attacks. Programmed by Irish authors St Brides, CRL added the gory illustrations prior to release in their commercial aim to secure that elusive 18 rating. Deemed "unnecessarily distasteful" by Sinclair User magazine at the time of release, the graphical limitations of the 8-bit machines meant that apparent acts of "gross violence" were merely poor depictions of bloody corpses.

In the same year, Rod Pike developed Wolfman, his third horror text adventure



Oh the horror! Someone protect us from this sick filth!

for CRL, but this well-written three-part title became lost in the ratings hype surrounding Jack the Ripper and was sadly overlooked by the press and public alike. As the title character, you awoke in a strange hovel, covered in blood and with no memory of the previous night's events. A mob of incensed villagers had surrounded the house, proclaiming that the Mayor's daughter had been killed – her throat ripped out. As the guilty party, your first task was to cover your tracks before escaping the village in search of a faraway temple where you could be cured of your bloodlust. Along the way you met a young girl named Nardia and you had to play from her perspective on several occasions.

Bloody bits

Ariolasoft seized the opportunity to capitalise on CRL's Frankenstein by releasing a game based on the Bride of Frankenstein movie. Neglecting the serious text-driven approach, Bride was a comical graphic adventure in which you controlled the title character in her hunt for the perfect husband. Set in Castle Frankenstein, you had to dodge various ghosts and skeletons as you searched the crypts and corridors for various body parts. Upon locating the brain, you could spark off the honeymoon by unlocking the laboratory and electrifying your man's vital organs.

Considering the inordinate cost of licensing fees, many software releases relied on unofficial yet blatant titles. Ariloasoft (under the guise of Viz Design) followed Bride with Werewolves of London (1988), a game evidently based on An American Werewolf in London. Adopting a similar 2D viewpoint to Bride, Werewolf saw you wandering around nondescript streets solving simple puzzles. These tasks were hindered because a full-moon signalled your transformation into the snarling title character, allowing you to release your repressed frustrations upon London's policemen, traffic wardens and underground commuters.

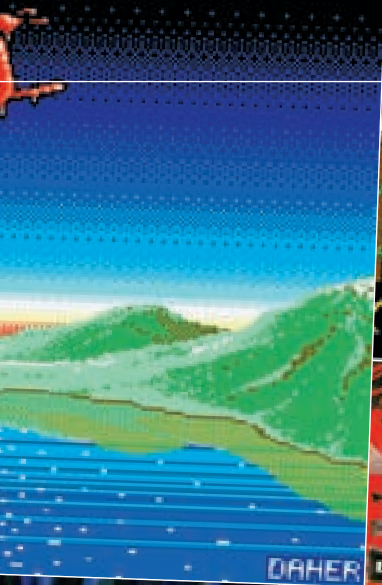
Another unlicensed product was Ubisoft's Zombi (1990), which proved to be a faithful interpretation of George Romero's Dawn of the Dead, right down to the zombie-infested shopping mall (with a helicopter on the roof) and the impending attack of the Hell's Angels. You took control of four characters and the main aim was to escape the mall by helicopter. From a first-person perspective, you had to search the mall for precious food while fending off the lumbering living dead. As in the film, looting the various shops for food and ammunition was the key to survival. Originally written for 8-bit computers, Zombi later appeared on the Amiga and Atari ST in a better-looking version.

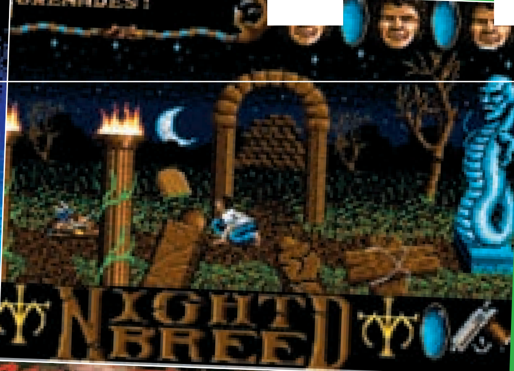
Barking mad

The work of Clive Barker has been represented in several computer games, the most well-known being Ocean's Nightbreed games. The first one, Nightbreed: The Action Game, appeared in 1988 on 8-bit and 16-bit machines. Based on Barker's epic movie, which in turn was based on his book Cabal, the game placed you in control of Aaron Boone as you ventured into the underground city of Midian in search of your girlfriend Lori. Standing in your way were the Nightbreed themselves and a bunch of rednecks who have stumbled upon Midian. Your chief adversary, though, was a mass-murderer known as The Mask.

As the title suggests, Nightbreed: The Action Game saw you kicking and punching your way down into the depth of Midian. The sequel, however, was subtitled The Interactive Movie and only released on PC, Amiga and Atari ST. Like many of Ocean's film licences, the result was an uneven mix of several mini-games, each based on a certain scene from the film. In fact, the game adhered to the plot of the film so closely that the player was forced into following a strictly linear path. The Interactive Movie was a step down from the first game and it sold poorly, canning the third game in what was originally slated as a trilogy of titles based on the film.

Two titles based on the Hellraiser films befell the same fate. The first, simply entitled Hellraiser, was developed in 1990 for the Nintendo Entertainment System (NES) by Color Dreams. Uniquely, the Hellraiser cartridge was rumoured to contain extra memory and an additional processor chip, allowing the game to display 16-bit style graphics and run three times faster than standard NES titles. Unfortunately, the cost of producing such a cartridge was judged to be too great









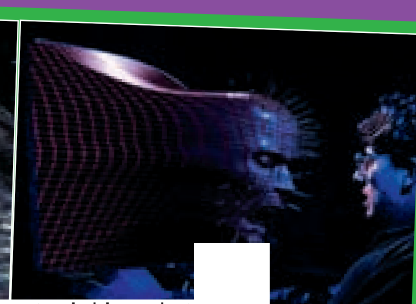
Descend into the depths of Midian in Ocean's gruesome twosome

and this ambitious project was scrapped with no prototype produced. As a result, very little is know about the game except that Color Dreams planned to cut the costs by releasing Hellraiser on the PC. The title was to be based around Wolfenstein (the forerunner to Doom) and it would even use Id's 3D engine, suggesting that Hellraiser was a first-person action adventure.

In 1995, Magnet Interactive Studios secured the licence and they set about developing Hellraiser: Virtual Hell for the PC. It too was a 3D adventure game in which you had to escape from the fiery depths of Hell. Along the way you encountered Pinhead and Pinball – a new Cenobite who could throw steel spheres, Phantasm-style. Doug Bradley lent his voice to the game during a day off from filming the fourth Hellraiser movie, and a rolling demo was produced that showed Pinhead emerging from a computer screen to swallow up the player, but Magnet could not find a publisher and the plug was pulled on Virtual Hell.

Although it is unlikely that the games mentioned here will ever become collector's items, they prove to be an intriguing element of the modern movie package. Who knows – perhaps one day we'll see an old licensed game turning up as a bonus item on the film's DVD release. RG*





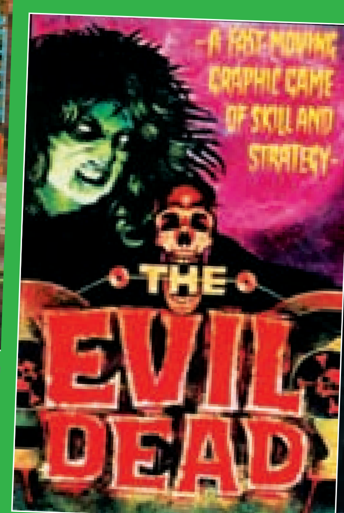
Virtual Hell failed to materialise, but many screens are floating around the Web

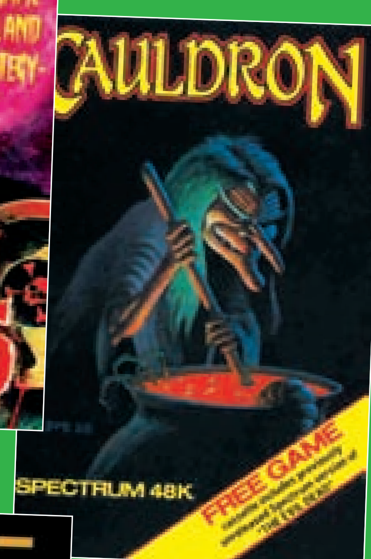
>Something Evil

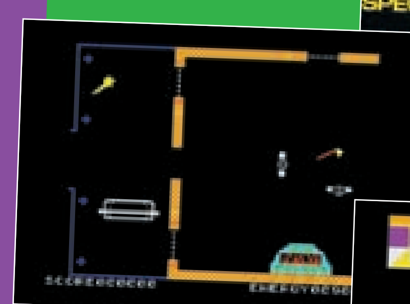
Palace Pictures shot to fame in the early 80s when they picked up The Evil Dead for UK distribution. The cheaply made horror movie was a huge cult hit, and it wasn't long before Palace's software arm released a tie-in game for the Spectrum, C64 and BBC Micro. All three versions were generally the same, although the Spectrum version supported the Currah Speech hardware add-on. It was used to good effect, voicing lines from the film such as the Evil Dead's plea of "Join us...join us".

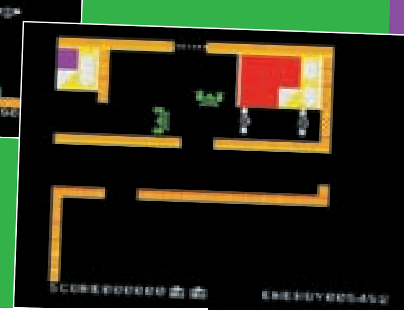
The gameplay took place within the cabin and the action was viewed from above. As Ash, you had to keep the Evil Dead out by moving from room to room closing the windows. If, or rather when, your friends became possessed, you had to destroy them using a variety of weapons (axe, spade, chainsaw and so on). The head, torso and legs of each body would then attack! When you had disposed of all these parts, the Necronomicon appeared and you had to throw it onto the fire. The game then began again, but the difficulty level was increased.

Extremely simplistic by today's standards, The Evil Dead is nevertheless fun to play (for about five minutes anyway). It is also rather rare so count yourself lucky if you come across a copy. The Spectrum version is particularly uncommon as it was never actually released as a main title. Instead, it was sneaked onto the b-side of Palace's excellent Cauldron game.









The Evil Dead game appeared on home computers in 1985, after the movie had been banned under the Video Recording Act!

eMag™

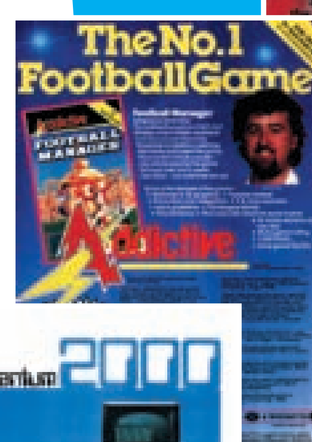
1983

advertising gallery

20 years ago and computer magazines were very different to the ones you read today. Besides pages and pages of program listings, there were always a number of classic adverts. We've selected our favourites from this classic year. Some signal the arrival of important milestones in computing history, while others just made us smile...









Sinclair ZX Spectr

16K or 48K RAM... full-size moving-key keyboard... colour and sound... high-resolution graphics...

From only £125!



First, there was the world-beating Sinclair ZX80. The first personal computer for under £100.

Then, the ZX81. With up to 16K RAM available, and the ZX Printer. Giving more power and more flexibility. Together, they've sold over 500,000 so far, to make Sinclair world leaders in personal computing. And the ZX81 remains the ideal low-cost introduction to computing.

Now there's the ZX Spectrum! With up to 48K of RAM. A full-size moving-key keyboard. Vivid colour and sound. High-resolution graphics. And a low price that's unrivalled.

Professional power–personal computer price!

The ZX Spectrum incorporates all the proven features of the ZX81. But its new 16K BASIC ROM dramatically increases your computing power.

You have access to a range of 8 colours for foreground, background and border, together with a sound generator and high-resolution graphics.

You have the facility to support separate data files.

You have a choice of storage capacities (governed by the amount of RAM). 16K of RAM (which you can uprate later to 48K of RAM) or a massive 48K of RAM.

Yet the price of the Spectrum 16K is an amazing £125! Even the popular 48K version costs only £175!

You may decide to begin with the 16K version. If so, you can still return it later for an upgrade. The cost? Around £60.

Ready to use today, easy to expand tomorrow

Your ZX Spectrum comes with a mains adaptor and all the necessary leads to connect to most cassette recorders and TVs (colour or black and white).

Employing Sinclair BASIC (now used in over 500,000 computers worldwide) the ZX Spectrum comes complete with two manuals which together represent a detailed course in BASIC programming. Whether you're a beginner or a competent programmer, you'll find them both of immense help. Depending on your computer experience, you'll quickly be moving into the colourful world of ZX Spectrum professional-level computing.

There's no need to stop there. The ZX Printer – available now – is fully compatible with the ZX Spectrum. And later this year there will be Microdrives for massive amounts of extra on-line storage, plus an RS232 / network interface board.



Key features of the Sinclair ZX Spectrum

- Full colour – 8 colours each for foreground, background and border, plus flashing and brightness-intensity control.
- Sound – BEEP command with variable pitch and duration.
- Massive RAM – 16K or 48K.
- Full-size moving-key keyboard – all keys at normal typewriter pitch, with repeat facility on each key.
- High-resolution – 256 dots horizontally x 192 vertically, each individually addressable for true high-resolution graphics.
- ASCII character set – with upper- and lower-case characters.
- Teletext-compatible – user software can generate 40 characters per line or other settings.
- High speed LOAD & SAVE – 16K in 100 seconds via cassette, with VERIFY & MERGE for programs and separate data files.
- Sinclair 16K extended BASIC – incorporating unique 'one-touch' keyword entry, syntax check, and report codes.

um



The ZX Printer – available now

Designed exclusively for use with the Sinclair ZX range of computers, the printer offers ZX Spectrum owners the full ASCII character set – including lower-case characters and high-resolution graphics.

A special feature is COPY which prints out exactly what is on the whole TV screen without the need for further instructions. Printing speed is 50 characters per second, with 32 characters per line and 9 lines per vertical inch.

The ZX Printer connects to the rear of your ZX Spectrum. A roll of paper (65ft long and 4in wide) is supplied, along with full instructions. Further supplies of paper are available in packs of five rolls.

The ZX Microdrive – coming soon

The new Microdrives, designed especially for the ZX Spectrum, are set to change the face of personal computing by providing mass on-line storage.

Each Microdrive can hold up to 100K bytes using a single interchangeable storage medium.

The transfer rate is 16K bytes per second, with an average access time of 3.5 seconds. And you'll be able to connect up to 8 Microdrives to your Spectrum via the ZX Expansion Module.

A remarkable breakthrough at a remarkable price. The Microdrives will be available in the early part of 1983 for around £50.





ZX Spectrum software on cassettes – available now

The Spectrum software library is growing every day. Subjects include games, education, and business/household management. Flight Simulation...Chess...Planetoids...History...Inventions...VU-CALC...VU-3D...Club Record Controller...there is something for everyone. And they all make full use of the Spectrum's colour, sound, and graphics capabilities. You'll receive a detailed catalogue with your Spectrum.

ZX Expansion Module

This module incorporates the three functions of Microdrive controller, local area network, and RS232 interface. Connect it to your Spectrum and you can control up to eight Microdrives, communicate with other computers, and drive a wide range of printers.

The potential is enormous, and the module will be available in the early part of 1983 for around £30.

How to order your ZX Spectrum

BY PHONE – Access, Barclaycard or Trustcard holders can call 01-200 0200 for personal attention 24 hours a day, every day. BY FREEPOST – use the no-stamp needed coupon below. You can pay by cheque, postal order, Barclaycard, Access or Trustcard.

EITHER WAY – please allow up to 28 days for delivery. And there's a 14-day money-back option, of course. We want you to be satisfied beyond doubt – and we have no doubt that you will be.

To: Sinclair Research, FREEPOST, Camberley, Surrey, GU15 3BR. **Order**

Qty	Item	Code	Item Price £	Total £
	Sinclair ZX Spectrum – 16K RAM version	100	125.00	
	Sinclair ZX Spectrum – 48K RAM version	101	175.00	
	Sinclair ZX Printer	27	59.95	
	Printer paper (pack of 5 rolls)	16	11.95	
	Postage and packing: orders under £100	28	2.95	
	orders over £100	29	4.95	
			Total £	

Please tick if you require a VAT receipt ☐

*I enclose a cheque/postal order payable to Sinclair Research Ltd for £ ______

*Please charge to my Access/Barclaycard/Trustcard account no.

*Please delete/complete as applicable

Signature

PLEASE PRINT

Name: Mr/Mrs/Miss

Address

PCW 902

FREEPOST – no stamp needed. **Prices apply to UK only.** **Export prices on application.**

sinclair

Sinclair Research Ltd, Stanhope Road, Camberley, Surrey GU15 3PS. Tel: Camberley (0276) 685311.

The original ZX Spectrum advert. All this for £125!



Oric looked to cash in on the success of the Spectrum



Down in price, but probably still too expensive for most parents



A classic C64 advert. It's not just a games machine you know

ELECTRONIC MAIL IN MICROSECONDS

You could also link up with other Commodore 64s: in branch offices, for example, or in colleagues' homes, with instant exchange of information.

You could also plug in to half a million pages of Prestel information, making use of key figures in combination with your own calculations for such statistics as you might need; or for other business uses, like car hire and hotel bookings.

The Commodore 64 means maximum flexibility, and provides the facts on which you can base sound business decisions.

home office.



INVALUABLE TO ANY BUSINESS

The Commodore 64 is the perfect computer for your own business, whatever its size. As well as the advantages we've already mentioned, it has a great capacity for expansion, and when combined with various peripherals** it is superbly flexible. Whether it's looking after personnel records or creating models, say, for sales forecasts, it will quickly prove to be of vital importance to any well run concern.

MORE POWER TO THE STUDENTS

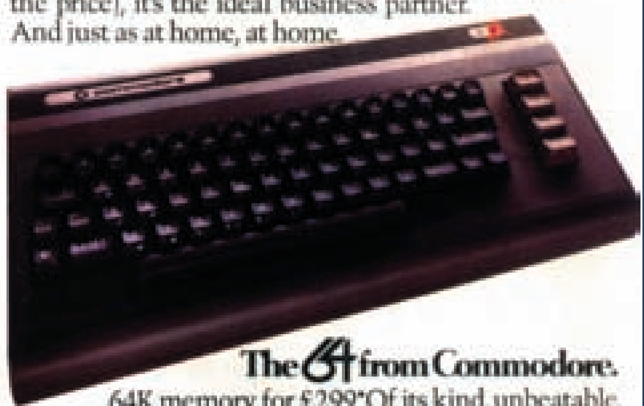
A Commodore 64 in education puts more computer power at students' disposal. Subjects include maths, from basic arithmetic to higher functions; vocabulary building; elementary science; basic geography; and of course, learning computing.

FOR EVERYONE WHO HAS A HOBBY

Apart from being an absorbing and fascinating pastime in itself, the Commodore 64 can be a tremendous help in countless hobbies. It's equally happy collating recipes for a cook or choosing moves for a chess enthusiast.

In short, the Commodore 64 is one of the most outstanding microcomputers ever built. Outperforming all other computers in its class (some at twice the price), it's the ideal business partner.

And just as at home, at home.



The 64 from Commodore.

64K memory for £299.* Of its kind, unbeatable. At its price, almost unbelievable.

commodore

Changing business for the better.

For more information on the powerful new Commodore 64, and the address of your nearest dealer, telephone or write to us at: The Commodore Information Centre, 675 Ajax Avenue, Slough, Berkshire, SL1 4BG. Telephone: Slough (0753) 79292.

☐ Business Enquiry ☐ Personal Enquiry

NAME (MR/MRS/MISS)

POSITION

COMPANY

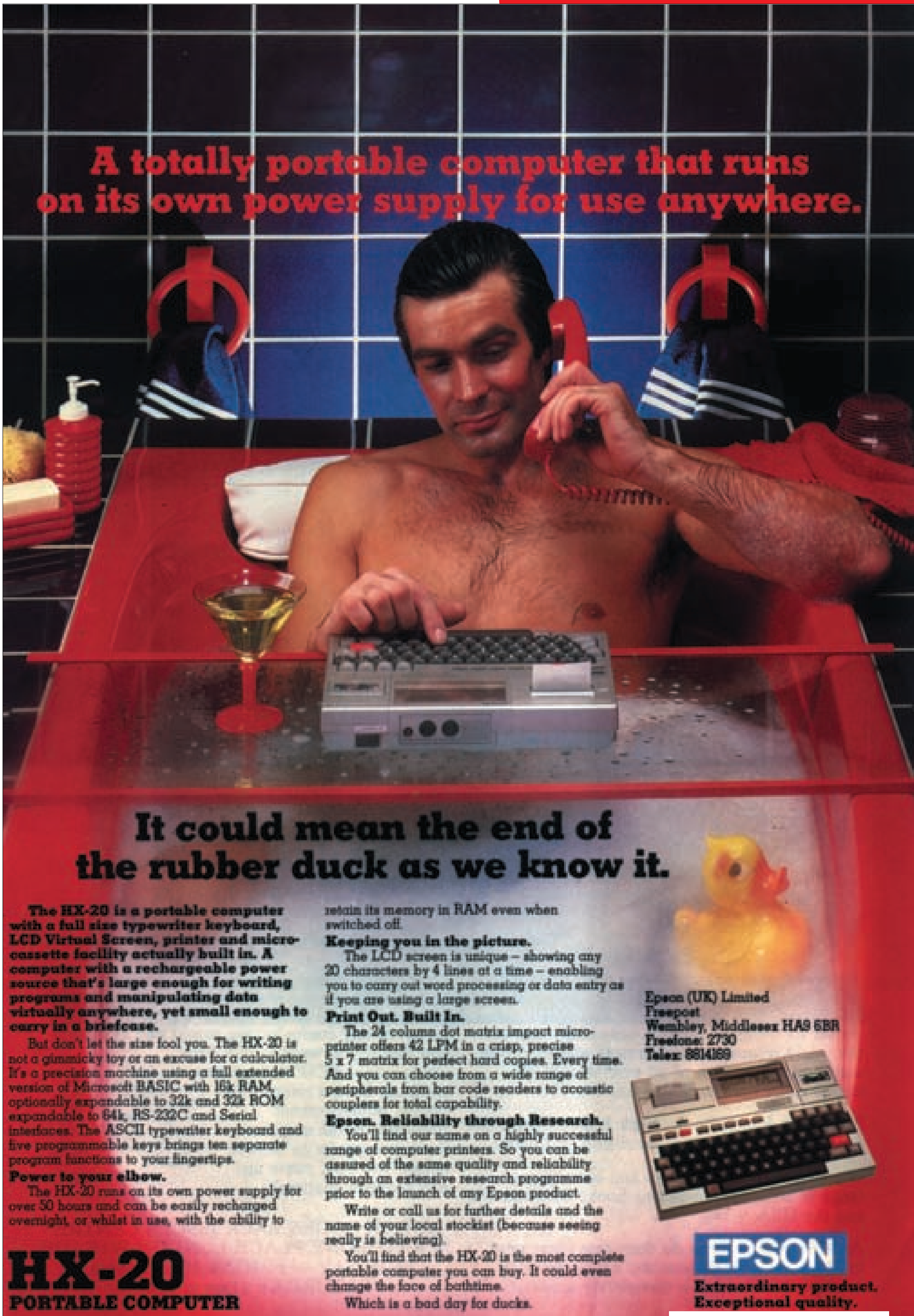
ADDRESS

POSTCODE TEL

*EXC. VAT. DETAILS CORRECT AT TIME OF GOING TO PRESS



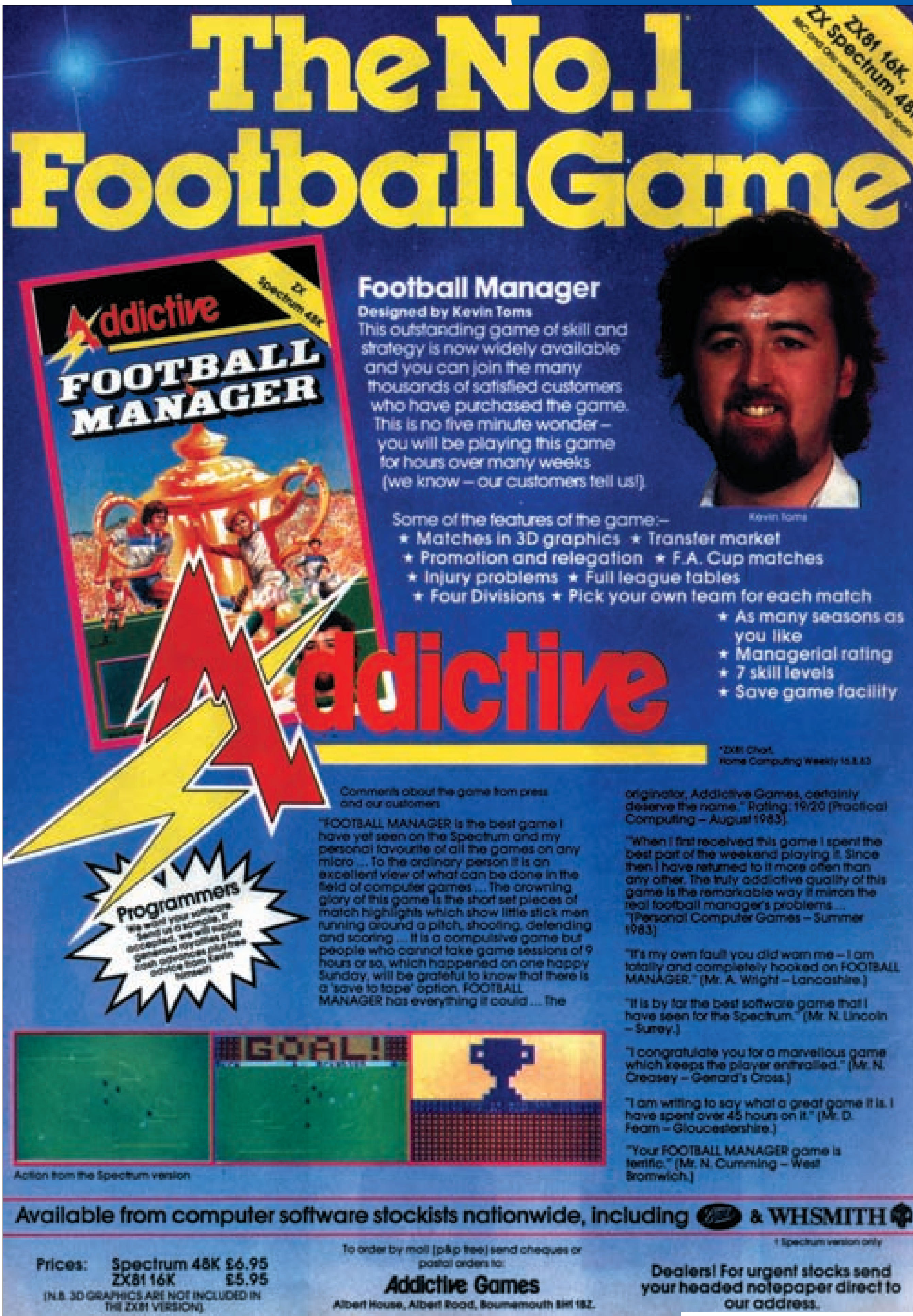
Wow! It's like something from the original Star Trek series!



Brings new meaning to the term multitasking



Ultimate arrives on the software scene



Ah, Kevin Toms. His bearded face was a reassuring sign of quality


BOULDER DASH
BOMBJACK TWIN
BUCKY O'HARE
CABAL
COLUMNS
COMBAT SCHOOL
GUARDIANS
CENTER CITY GYM
FOUL
HIT THE ICE
HOGGER
KICK OFF
MARVIN'S MAZE
Mustache Boy
Mr. Do!
Sinbad 7
RAMBO III
STREET FIGHTER
STREET FIGHTER ZERO
STRIKE AVENGER
VS. SUPER MARIO BROS.



Emulation Nation

Reading and reminiscing about retro games is one thing, but what if you want to walk the full length of memory lane and actually play these classic titles? The easiest and least expensive way is through emulation. Martyn Carroll looks at the many emulators available for your home PC

Emulation is very popular. One of the very first emulation Web sites, Emulators Unlimited (www.emuunlim.com), is fast approaching the 15-million hit mark! The site is home to hundreds of different utilities that collectively emulate any old console or computer you could care to mention. Whether you want to play Atari 2600 games on your PC, revisit the Amiga Workbench or test-drive the Gameboy Advance before you buy one, you'll find an emulator that will do just the job.

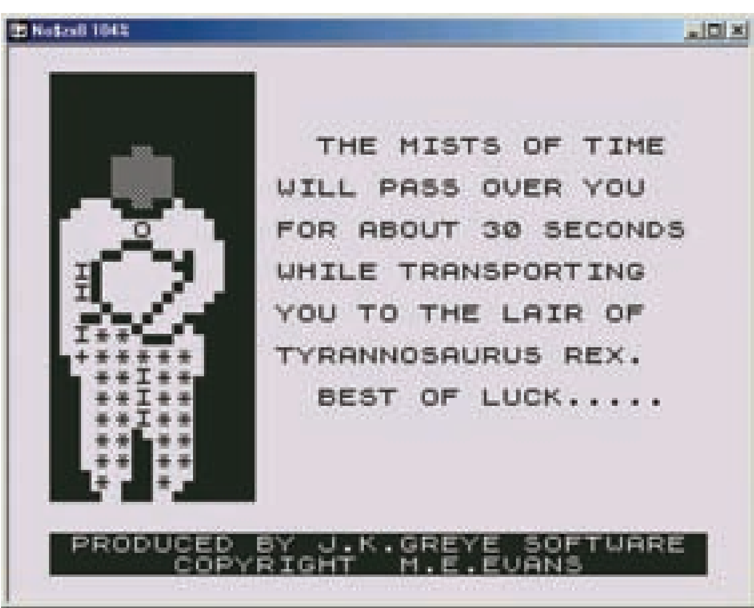
Because there are generally many different programs that emulate the same machines (there are over a dozen Spectrum emulators for example), the obvious question is which one do you opt for? The choice is often complicated because emulators often stem from the source code of other emulators. First and foremost, you require a program which faithfully replicates the machine in question. That means it emulates each hardware component and runs all of the available software – compatibility is key. Secondly, as the software is usually written by enthusiasts rather than professional programmers, you require a program which is easy to set-up and use (and includes relevant user information). Last and least, you'll be looking for an emulator with a few bells and whistles – one which lets you control games using your PC joystick, for instance, and allows you to save your progress while playing.

The aim of the article is to look at each popular platform of yesteryear (and a few not so popular) and pick out the best emulators for each computer or console. All of the programs mentioned can be found on the Retro Gamer * coverdisc.

emulating computers

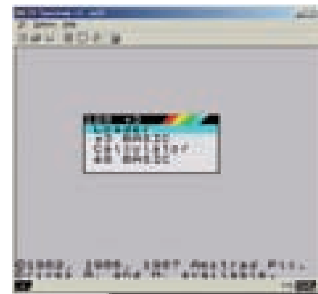
A number of readers will fondly remember the Sinclair ZX81 (and perhaps its even more primitive forerunner, the ZX80). For many enthusiasts, these cheap and cheerful machines were single-handedly responsible for igniting their interest in computers. If you're looking to relive a little bit of computing history by emulating a ZX80/81 on your PC then you can use either Xtender2 or NO$ZX81.

The Xtender2 readme goes out of its way to ward you off by stating that the program is "NOT user-friendly" and "NOT intended for regular users". NO$ZX81 does at least include common sense documentation but development has ceased and the emulator has been discontinued. Serious bugs, and there are several, are seemingly there to stay, although it does work with the majority of programs I tested. Despite the warnings in the readme, Xtender2 isn't too difficult to use and it also runs native software without a hitch. The main difference between NO$ZX81 and Xtender2 is that the former does not support high-resolution graphics whereas the latter supports all graphics modes.



How far back can you go? How about a game of 3D Monster Maze on the ZX81?

ZX80/81 emulators are rare but if you're looking to emulate the subsequent Sinclair machine, the ZX Spectrum, you'll be spoilt for choice. There are literally dozens of Spectrum emulators available and some of them have been in development so long that they emulate the host machine perfectly. One such example is ZX32, which emulates all of the Spectrum models from the humble 16Kb version right up to the floppy disk-driven +3. The program will even check the software you want to load and default to the best model for running it. ZX32 supports all of the popular file types, including the .tzx file format which is regarded as the best way of preserving Spectrum software in its original form.







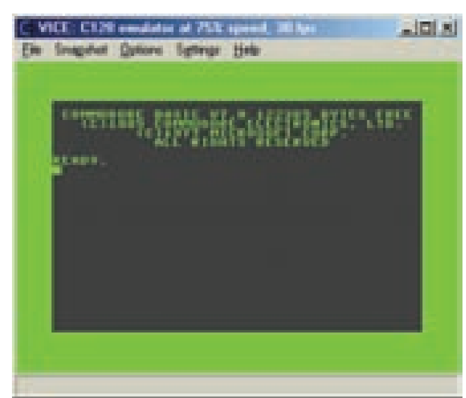


The irrepressible Sinclair Spectrum. Perhaps the most emulated machine in existence

Development of ZX32 appears to have stopped, so if you're looking for a cutting-edge Spectrum emulator you should take a look at RealSpectrum. It runs all Spectrum software without a hitch and yet also expands upon ZX32 by emulating various hardware add-ons such as the ZX Interface 1, the DISCiPLE/+D disk interface and the Kempston mouse. You can even use it to set up Spectrum network over the Web! Note that there are several versions of the emulator, each one optimised to work with different processors.

There are several emulators available for Sir Clive's last Sinclair machine, the rather grand sounding Sinclair QL (Quantum Leap). The majority are shareware though (meaning you must pay if you want to use the emulator after the free trial period). One completely free QL emulator is QLAYw. It is no longer developed and therefore slightly lacking in some departments, but it's easy enough to set up (don't forget to assign the ROM file you want to run to a Microdrive port!) and offers faithful QL emulator.

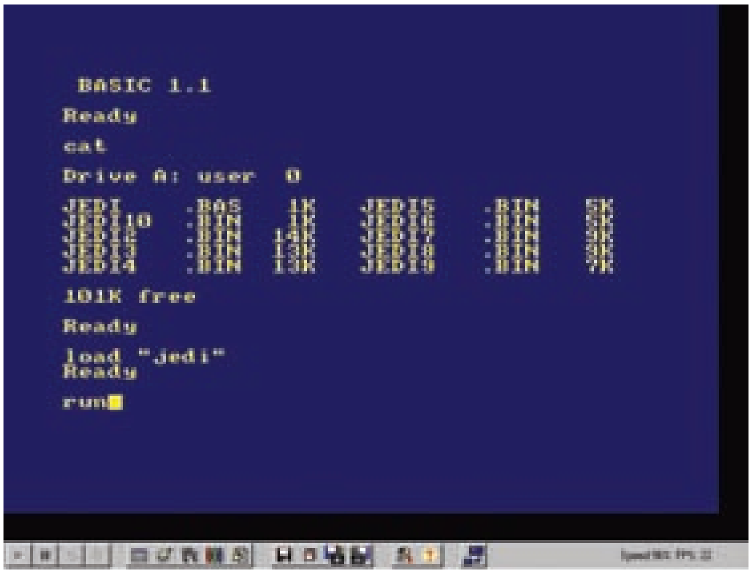
More 8-bit micros



WinVICE is a one-stop shop for your Commodore emulation needs

The Spectrum's main competition in the home-computer market came from the Commodore 64 and the Vic 20. WinVICE emulates both machines, as well as other models in the Commodore range, including the original PET computers, the CBM-II and the Commodore 128. The program is extremely stable and the latest version simply fixes a few bugs caused by individual games. WinVICE is so popular that other Commodore emulators are generally ignored. However, if you're looking for a dedicated C64 emulator you should try Frodo, a program which focuses on reproducing special graphical effects exactly and includes support for various peripherals.

WinVICE also offers support for the Commodore 16 and Plus/4 models, but if you're looking for a dedicated emulator then try either Minus4w or Artifex. Both emulators are very similar and they run all software I tested (including dedicated Plus/4 games). They even include the 3-in-1 office suite built into the Plus/4!



Loading disk images in WinAPE can be tricky – this screenshot shows you how

Due to their relative lack of popularity at the time, Amstrad's range of CPC computers are not as well supported in the emulation scene. There are, however, a couple of good emulators in the form of WinAPE and Arnold. WinAPE accurately emulates the entire CPC range (including the CPC+ models) but it can be difficult to get up and running, especially if you're unfamiliar with Amstrad BASIC. Thankfully, the Running Programs chapter in the Help text steps you through the process. Similarly, Arnold can be confusing to use but all the help you need is included in the readme file. There is very little to choose between the two emulators except that Arnold features a number of configurable options, including one which allows purists to change to a green screen display (CPCs were originally purchased with either a green screen or colour monitor).

The Spectrum, Commodore and Amstrad computers dominated the European home-computer market throughout the 1980s and any other manufacturer that dared enter the fray was immediately fighting a losing battle. Three early computer casualties were the Jupiter Ace, the Oric-1 and the Atari 800. While largely ignored and rare as a result, there are dedicated emulators available to download. Ace32 is a Jupiter Ace emulator that runs under DOS. It works fine under Windows too – just refer to the readme for the various keyboard commands. Development of this program appears to have discontinued but it runs the small amount of software available for download from the Web without a hitch.

Euphoric allows you to emulate the Oric-1 and its lesser known successors, the Atmos and the Telestrat. Unusually, this emulator installs itself on your system but this does mean that you can easily launch tape and disc files by simply double-clicking them from within Windows Explorer. This saves you from having to use Oric Extended BASIC to launch programs. If you're looking to emulate the Atari 800 computer you can use Atari800Win – a program which accurately emulates all hardware aspects of the machine and can also be configured to behave like any of the Atari 8-bit models (including the XL and XE variations). If features full sound support and is able to emulate both the Atari disk drives and cartridge slot. Unlike many of the programs mentioned here, the ROM files required to run the emulator are not provided so you'll need to obtain them from the Web. However, the accompanying readme file tells you exactly which files you need, where to get them and what to do with them.



The Atari 800 was home to one of the very best versions of Pitfall 2

mac attack!

Ask anyone who works in a design department if they prefer to work on PCs or Apple Macs and they'll unanimously opt for the latter. It seems that designers prefer to use Macintosh software over Windows software. Compared to PCs, Macs are more expensive and less popular, but you can use an emulator to run Mac OS on your PC.

Emulators, Inc. produce three different Macintosh emulators designed to handle all versions of Mac OS on different types of PCs. Fusion is a free emulator aimed at DOS users that is recommended for use on 486 and Pentium systems. It runs System 7.0 and 7.1 as well as Mac OS version 7.5, 7.6, 8.0 and 8.1. Gemulator 2000 is a basic Mac Classic emulator that is capable of running System 6.0, 7.0 and 7.5. It is especially useful for running old Mac Plus and Mac Classic games which may not even work on newer Macs. Finally, SoftMac 2000 emulates the Mac Classic, Mac II, Mac LC, Mac Quadra and all versions of Mac OS up to 8.1.

Here's the best bit – all three programs deliver around 70% of the clock speed in emulation. This basically means that a 500MHz Windows PC will emulate the equivalent of a 300MHz Macintosh running Mac OS 8.



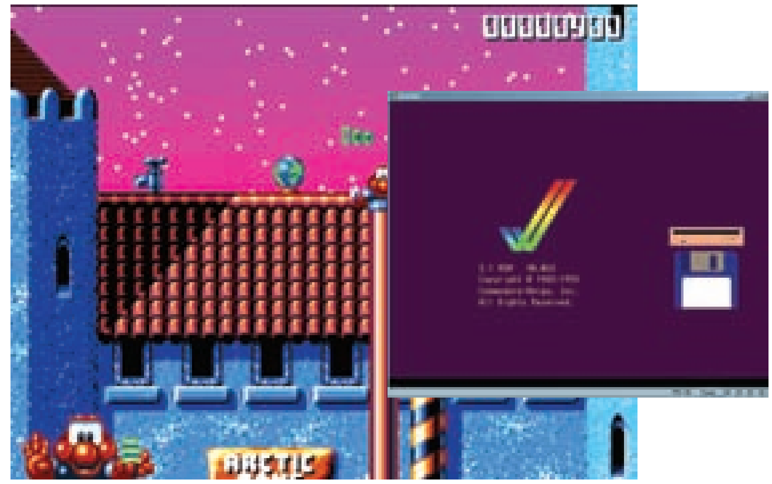
You can emulate old or new Apple Macs (and even the Lisa) using various emulators

16-bit models

Atari enjoyed greater success with its 16-bit ST machine. WinSTon is branded as the definitive Atari ST emulator for Windows as it's very stable, offers excellent software compatibility (especially with games) and features full sound support. It's ideal for beginners too because it's very easy to set up and yet packs in enough features to satisfy experienced ST users. You can use it to emulate an ST hard drive with up to four partitions and it is possible to read original ST disks using you PC's floppy disk drive. Earlier versions required you to locate the TOS (Tramiel Operating System) ROM but the latest release includes the file, so you can revisit the familiar green desktop without searching the Internet beforehand. WinSTon only emulates the standard ST machine. If you're looking to emulate the expanded model, the Atari STE, you will need to use Steem. This new emulator runs all of the standard ST software as well as the rarer STE releases. You do need to obtain a TOS ROM though.



Let WinSTon and Steem take you back to the ST's lovely green desktop!



Relive the delights of Robocod using the excellent WinUAE Amiga emulator

The ST was eventually overshadowed by the very popular Commodore Amiga. Despite it's prevalence, there are very few Amiga emulators available. By far the most popular is WinUAE (Universal Amiga Emulator) which, as the title suggests, emulates every home model from the A500 to the A1200. It can be quite confusing to use it first – you have to configure the program correctly and point it to both the Amiga Kikstart ROM and program ROM before emulation – but it does offer authentic emulation and runs all programs tested. At the very least WinUAE requires a P200 to run. If your machine can't cut the mustard, we recommend WinFellow – an excellent, if slightly simplistic alternative for users with less-powerful PCs.

I couldn't move on to consoles without briefly mentioning the Acorn range of computers. A number of emulators cater for the BBC Micro, although we recommend BeebEm (Windows) and B-EM (DOS) above the others as they are the most advanced. Electron emulation is taken care of with ElectrEm (which is great despite a dodgy GUI), while for the Archimedes you can choose from either Archie or Red Squirrel. The latter is classed as alpha software and we experienced problems running some games. Archie, on the other hand, ran all software tested. However, the RISC OS ROMs are required to run both emulators.

GBA emulation

When a new console is released, programmers fall over themselves to be the first to emulate it. In the case of the GameBoy Advance, emulators began to surface before the handheld was even released! Much to Nintendo's chagrin, it seems that resourceful writers got their hands on development kits and began to see what was making the machine tick.

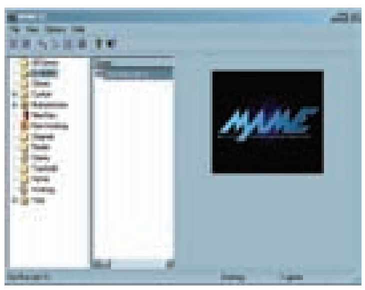
While the some of these emulators only run home-made demos, several will actually run the latest commercial games. Boycott Advance is one example that originally had problems emulating some 3D games but with the latest release runs all games without a hitch or a graphical glitch. Better still is the excellent VisualBoyAdvance which allows you to use cheats and save your progress. It also emulates the Pocket, Super and Color GameBoys, making it the definite GameBoy emulator.

Emulating handheld games may seem nonsensical, especially as the whole point of the GBA is that you can play it while one the move (or, more appropriately, while sitting on the toilet). But at least you can preview games before you go out and buy them.



Squint at a small screen no longer – run GBA games on your PC!





MAME can emulate a stunning range of arcade systems, giving you access to a massive back catalogue of games

Arcade at home

So far we've looked at home computers and consoles, but emulation doesn't have to stop in the home. Several older arcade machine boards are the focus of a few emulators out there and the need to track down that old arcade favourite and pump it full of 10p pieces is no longer necessary.

When it comes to emulating arcade games many people turn to MAME, the Multiple Arcade Machine Emulator. This is a multiple-format emulator that can replicate a large range of arcade boards from a variety of manufacturers. The easy-to-use Windows port, MAME32, includes support for over 3,000 arcade games, and the number is growing with each new release. Besides MAME there are other arcade emulators of worth. RAINE, in particular, is recommended as it features one of the friendliest interfaces of any emulator and supports hundreds of popular arcade games. If you can't get a game working with MAME then try RAINE. If you're a fan of fighting games then don't miss Callus. This Capcom arcade system emulator lets you play all of the major Capcom titles, including the Street Fighter II series and its many spin-off games.

It seems the only old arcade games that neither of these programs can emulate are the classic laserdisc titles, such as Dragon's Lair and Space Ace. You can, however, use DAPHNE to achieve this aim, providing you have a supported laserdisc player and the original game laserdisc. As that's something of a tall order, it's also possible grab the games from the Web as MPEGs (they're pretty large mind) and play them using your PC.

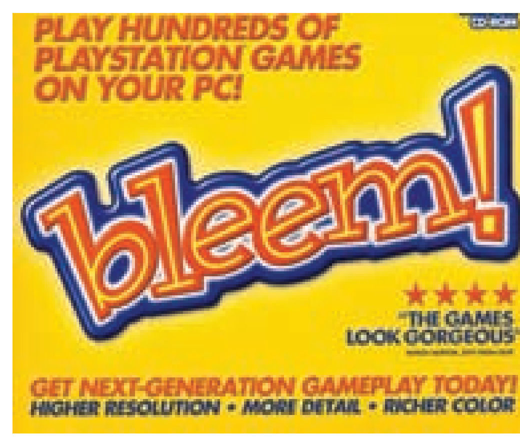
Emulating consoles

If there was one single program which drew attention to the emulation scene it would have to be UltraHLE (High Level Emulator). This tiny, freeware program was the first playable Nintendo 64 console emulator and it caused a storm, mainly because the machine it emulated was retailing for £200 at the time! Legal threats were issued and development of the program was immediately discontinued. The original release still stands up well with the glut of N64 emulators which have appeared since, although it will not play some of the more recent games. One active N64 emulator which expands its compatibility list with each new release is Nemu64. Most games run smoothly even when in full-screen mode, but success generally depends on your system setup and the graphics card you are using. With N64 emulation, if one program doesn't work for you just try another from either Blade64, Project64 or 1964.



The N64 may have been superseded by the GameCube, but you can relive some of its finest games on your PC

The popularity of the Sony PlayStation has also led to several emulators of debatable legality. At the top of the pile, in terms of infamy at least, are bleem! and Virtual Game Station – two commercial emulators which have been hindered by legal threats and lawsuits. In fact, all assets relating to Virtual Game Station have since been acquired by Sony and development has ended with version 1.4. It still runs the vast majority of PlayStation games straight from the CD, although it renders the visuals in software using DirectDraw capabilities. bleem!, on the other hand, supports Direct 3D compatible graphics cards and actually enhances the visuals. Both programs play original games, backup copies and imports – just pop the disc in the drive and the game will load. In the demo version of bleem! sound is disabled and you cannot save your progress while playing games. Note that due to copyright issues, we are unable to include these emulators on the coverdisc.



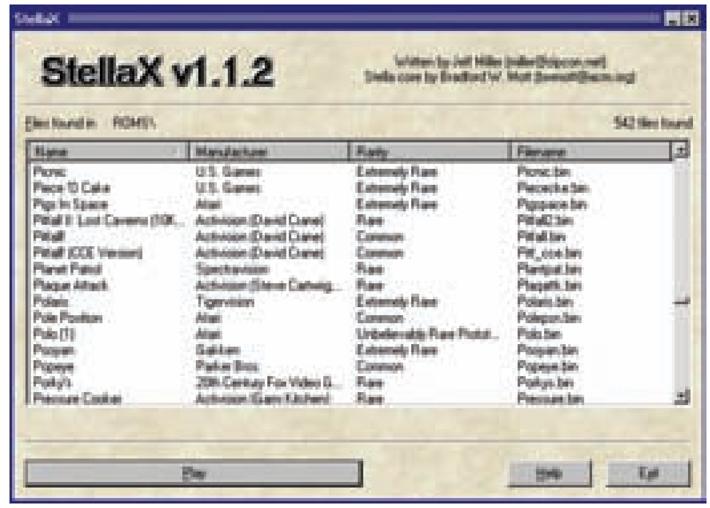
Strangely, bleem! even went on sale as a boxed product for a short time before its untimely demise

If you're looking for a free alternative, then ePSXe and FPSE are the best of the bunch (once you've taken time to configure them correctly). A PlayStation BIOS ROM is required to run both emulators however, so you'll need to scour the shadier side of the Web before beginning.

games galore

If anything, console emulation is more popular than computer emulation and just about every gaming platform has been emulated. The classic Atari 2600 is no exception and there are several excellent emulators available. StellaX is certainly the most popular, mainly because it runs all 2600 cartridge games and the rarer Supercharger cassette games. The only downside is that you can't configure your own keyboard controls, although you can use a PC joystick to play the games.

Atari has always commanded a cult following and all of their subsequent machines have been emulated, including the unsuccessful 5200 SuperSystem and 7800 ProSystem models. If you wish to emulate these machines, then Daniel Boris is your man because he's written emulators for both! Virtual Super System and v7800 are somewhat basic and run in DOS, but beggars can't be choosers. Everything is run and configured from the command line so be prepared to fiddle around with various options before getting any results. ROM files are also required. If the thought of using a DOS-based program makes you turn green, try out Jum52, an excellent new emulator that runs under the relative safety of Windows. Like Virtual Super System, a 5200 BIOS ROM is required. Similarly, you'll need an appropriate ROM file to run Handy – the Atari Lynx emulator. The final Atari console, the psuedo-64-bit Jaguar, is proving difficult to emulate. Several promising projects are afoot and furthest down the development line is Project Tempest – the first Jaguar emulator to actually run commercial games. At present, only some games include support for sound, and a fairly fast PC is required to run games at a steady frame rate.



A great feature of this emulator is the rarity display. This shows how rare the original cart currently is

Besides Sony and Nintendo, Atari's other rival in the console market was Sega. Programming teams are struggling to emulate the two most recent Sega consoles, the Saturn and the Dreamcast, but the earlier machines are well represented in the emulation scene. In particular, there are many Megadrive emulators available to download and lots of debate over which is the best one. If you're looking to play



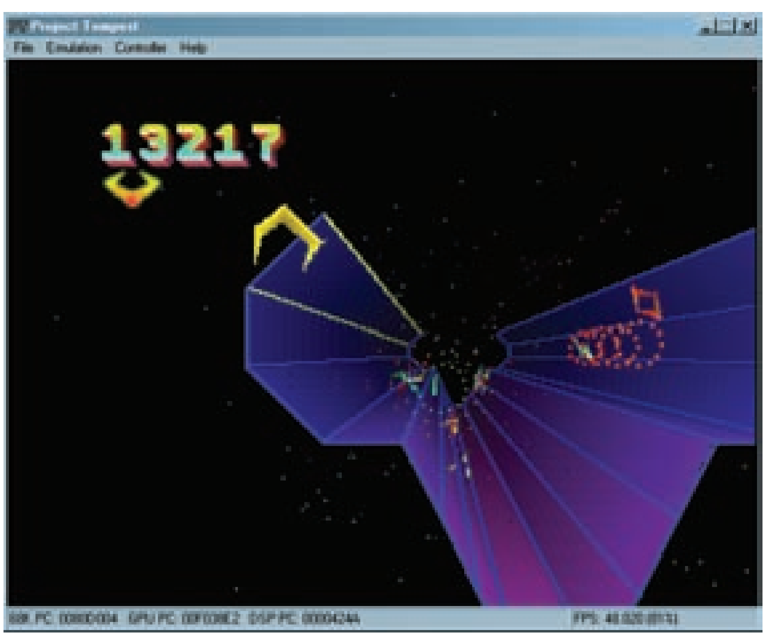
The various Megadrive emulators throw open the door to 100s of classic games

Sharing your wares

While using emulators is not illegal, downloading the games to play on them is. You see, someone owns the copyright to just about every game ever released. Unless you own an original copy of the game or the copyright holder has declared that the game can be freely distributed, it is technically theft to download it for free. And don't be fooled by the disclaimers on Web sites that claim that it's OK to download games as long as you delete them after 24 hours. No such law has ever been introduced.

This includes old games too, because even if the original publisher no longer exists as a company, you'll often find that the rights fall to the original programmer. If the publisher has been bought out by another company, the rights will belong to them, lock, stock and back catalogue.

Shades of grey do creep in when considering old games however. To be found guilty of copyright theft it must be proved that downloading games is done at the expense of the copyright holder. So while this would obviously cover downloading PlayStation and GameBoy Advance games from dodgy Web sites, it can't be realistically levelled against those who download old Spectrum and Commodore games. After all, these games have not been commercially available for between 10 and 20 years! We do not condone piracy in anyway whatsoever, but it's a matter of fact that no one has ever been prosecuted for downloading and playing old games.



Finally you can emulate the Atari Jaguar, the world's first 64-bit console, on your PC

standard Megadrive games, we recommend Kgen as Sega itself is using the program to re-release some of its older titles. However, to emulate the Mega-CD and the 32X add-ons use Gens and Retrodrive respectively. Moving back in time further, you can emulate both the original Sega Master System and the handheld Sega Game Gear using either ChaSMS or FreezeSMS. The latter now includes additional support for the Colcovision console.

The Master System's main competitor was the Nintendo Entertainment System (NES) and there are literally dozens of emulators available for this, with new ones surfacing regularly. The NES had a strange system of mappers that determined how the game ROMs were accessed and each one has to be coded separately when writing an emulator, so the more mappers, the higher the compatibility rate. At present, fwNES supports the most mappers, with RockNES running a close second. However, many argue that Nesticle, the first ever NES emulator, is still the best as it supports all sound channels, allows you to save your game and will run full speed on low-end systems. When it comes to emulating the Super Nintendo system, you are generally limited to either SNES9x or ZSNES. Both programs offer fast, faithful emulation and actually expand upon the original machine by allowing you to play multiplayer games over the Internet!



Enjoy an online game of Super Bomberman using SNES9x or ZSNES

To be continued...

In this introductory feature I've looked at emulators designed to run on a home PC. In issue two of Retro Gamer, I'll take a closer look at other host machines, including the GamePark 32, Xbox and PlayStation 2. That's right – you can run classic games on the very latest consoles!



back in the day

when the pixel was king

issue 2 hits the shelves april 2004



RETRO GAMER